STREET IMPROVEMENT DETAILS

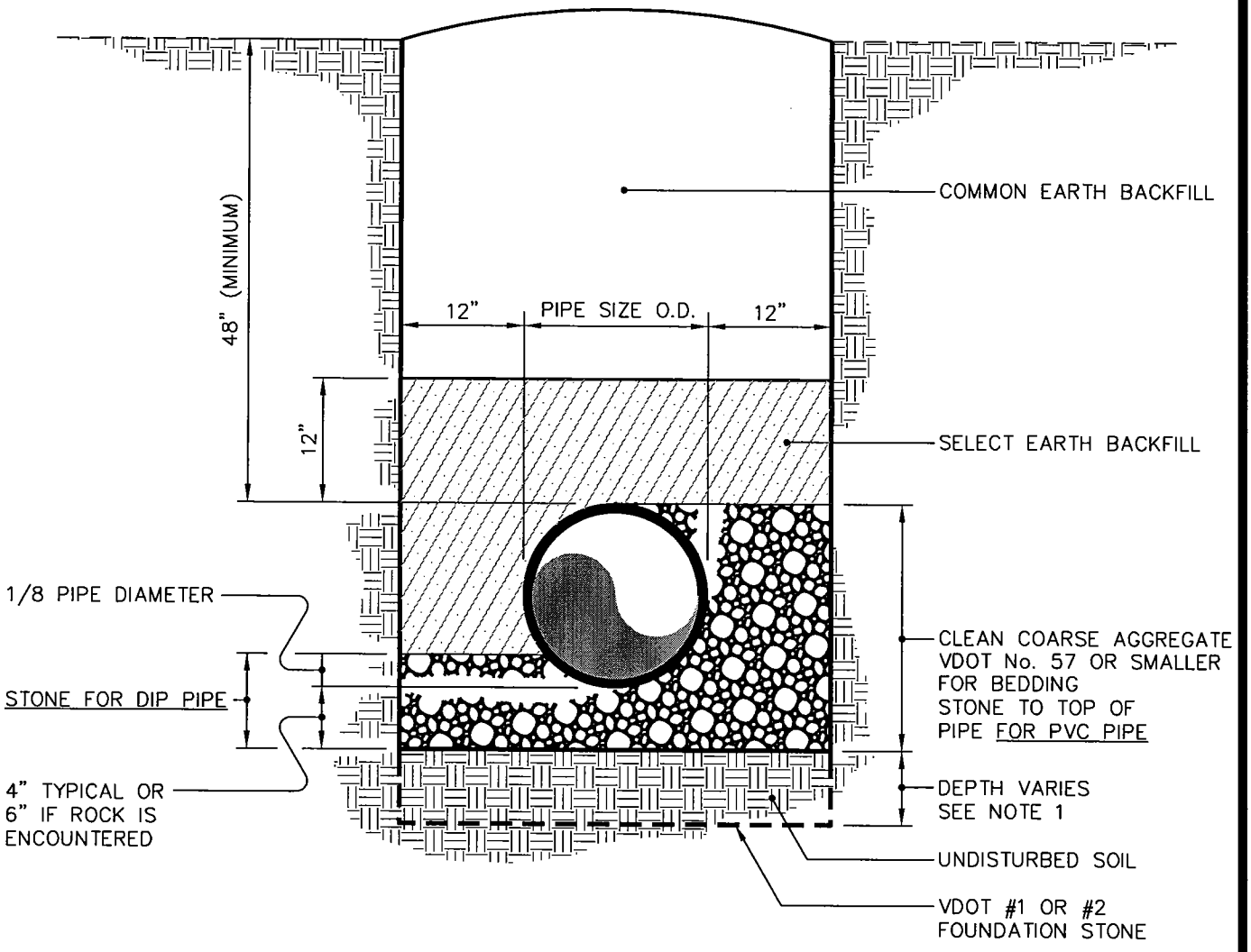
DETAIL #	SHEETS	DESCRIPTION
25.01	SHEET 1:2	TYPICAL CURB and GUTTER STREET SECTION
25.01	SHEET 2:2	TYPICAL CURB and GUTTER STREET SECTION
25.02	SHEET 1:1	CUL-DE-SAC DIMENSIONS
25.03		RESERVED FOR FUTURE USE
25.04	SHEET 1:3	STANDARD CURB & GUTTER & VALLEY GUTTER DETAIL
25.04	SHEET 2:3	STANDARD CURB & GUTTER & VALLEY GUTTER DETAIL
25.04	SHEET 3:3	STANDARD CURB & GUTTER & VALLEY GUTTER DETAIL
25.04A	SHEET 1:1	STANDARD CONCRETE CURB 6" x 18"
25.05	SHEET 1:1	STANDARD SIDEWALK DETAIL
25.06	SHEET 1:1	FACEDOWN SIDEWALK
25.07	SHEET 1:1	TREE WELL OPENING IN SIDEWALK
25.08	SHEET 1:1	RAISING MANHOLES and LAMPSTACKS
25.09	SHEET 1:1	MANHOLE ADJUSTING RING
25.10	SHEET 1:2	DRIVEWAY OPENING ACROSS SIDEWALK
25.10	SHEET 2:2	DRIVEWAY OPENING ACROSS SIDEWALK
25.11	SHEET 1:1	RESIDENTIAL DRIVEWAY ENTRANCE
25.12	SHEET 1:1	COMMERCIAL DRIVEWAY ENTRANCE
25.13	SHEET 1:2	TYPE I - HANDICAP RAMP for TEE INTERSECTION with GRASS STRIP
25.13	SHEET 2:2	TYPE I - HANDICAP RAMP for TEE INTERSECTION with GRASS STRIP
25.14		RESERVED FOR FUTURE USE
25.15	SHEET 1:2	TYPE 2 - HANDICAP RAMP for INTERSECTION without GRASS STRIP
25.15	SHEET 2:2	TYPE 2 - HANDICAP RAMP for INTERSECTION without GRASS STRIP
25.16	SHEET 1:2	TYPE 3 - HANDICAP RAMP for INTERSECTION with GRASS STRIP
25.16	SHEET 2:2	TYPE 3 - HANDICAP RAMP for INTERSECTION with GRASS STRIP
25.17	SHEET 1:2	TYPE 4 - HANDICAP RAMP for INTERSECTION with GRASS STRIP
25.17	SHEET 2:2	TYPE 4 - HANDICAP RAMP for INTERSECTION with GRASS STRIP
25.18	SHEET 1:1	TRENCH PATCH - ASPHALT STREETS, TYPE A, B, & C
25.19	SHEET 1:1	TRENCH PATCH - CONCRETE STREETS, TYPE D, E, & F
25.20	SHEET 1:1	TRENCH PATCH TEMPORARY, TYPE G
25.21	SHEET 1:1	TRENCH PATCH - HISTORICAL DISTRICT - TYPE H
25.22	SHEET 1:1	TRENCH PATCH - HISTORICAL DISTRICT - TYPE I
25.23	SHEET 1:1	HORIZONTAL CONTROL MONUMENT
25.24	SHEET 1:1	CSO PROJECT SIGN - VRLF AND EPA GRANT FUNDED

WATER SYSTEM DETAILS

DETAIL #	SHEETS	DESCRIPTION
26.01	SHEET 1:1	WATER LINE TRENCH DETAIL
26.02	SHEET 1:3	TYPE "F" HORIZONTAL ANCHOR BLOCKING
26.02	SHEET 2:3	TYPE "F" HORIZONTAL ANCHOR BLOCKING
26.02	SHEET 3:3	TYPE "F" HORIZONTAL ANCHOR BLOCKING
26.03	SHEET 1:1	TIE ROD ANCHORS DATUM CHART
26.04	SHEET 1:2	THRUST COLLAR & BLOCKING DETAIL
26.04	SHEET 2:2	MEG-A-LUG THRUST RING
26.05	SHEET 1:1	VERTICAL BEND IN WATER LINE DETAIL
26.06	SHEET 1:1	TAPPING SLEEVE & VALVE DETAIL
26.07	SHEET 1:1	BUTTERFLY VALVE IN PRECAST MANHOLE
26.08	SHEET 1:1	END of LINE for FUTURE EXPANSION
26.09	SHEET 1:1	TYPICAL FIRE HYDRANT CONNECTION DETAIL
26.10	SHEET 1:1	TEMPORARY BLOW-OFF ASSEMBLY DETAIL
26.11	SHEET 1:1	AIR & VACUUM RELEASE VALVE in PRECAST MANHOLE
26.12	SHEET 1:1	3/4 INCH WATER SERVICE (1 INCH WATER SERVICE SIMILAR)
26.13	SHEET 1:1	2-INCH WATER SERVICE (1 1/2 INCH WATER SERVICE SIMILAR)
26.14	SHEET 1:1	TYP. DOUBLE STRAP SERVICE SADDLE FOR 6" THRU 12" MAINS
26.15	SHEET 1:1	STANDARD 18"X24", 24"X30", OR 30"X30" - ROUND METER BOX
26.16	SHEET 1:1	2 - PIECE ADJUSTABLE SCREW VALVE BOX DETAIL
26.17	SHEET 1:1	DIVISION VALVE MARKER DETAIL
26.18	SHEET 1:1	VALVE BOX PRECAST SHOULDER SLAB DETAIL
26.19	SHEET 1:2	TURBO METER VAULT
26.19	SHEET 2:2	TURBO METER VAULT
26.20	SHEET 1:2	FIRE LINE DOUBLE DETECTOR CHECK VALVE
26.20	SHEET 2:2	FIRE LINE DOUBLE DETECTOR CHECK VALVE
26.21	SHEET 1:2	COMPOUND METER VAULT
26.21	SHEET 2:2	COMPOUND METER VAULT
26.22	SHEET 1:2	WATER LINE CROSSING BENEATH STREAM BED
26.22	SHEET 2:2	WATER LINE CROSSING BENEATH STREAM BED
26.23	SHEET 1:1	STANDARD MANHOLE FRAME and COVER - WATER
26.24	SHEET 1:2	STEEL ENCASEMENT DETAIL
26.24	SHEET 2:2	STEEL ENCASEMENT DETAIL

SEWER SYSTEM DETAILS

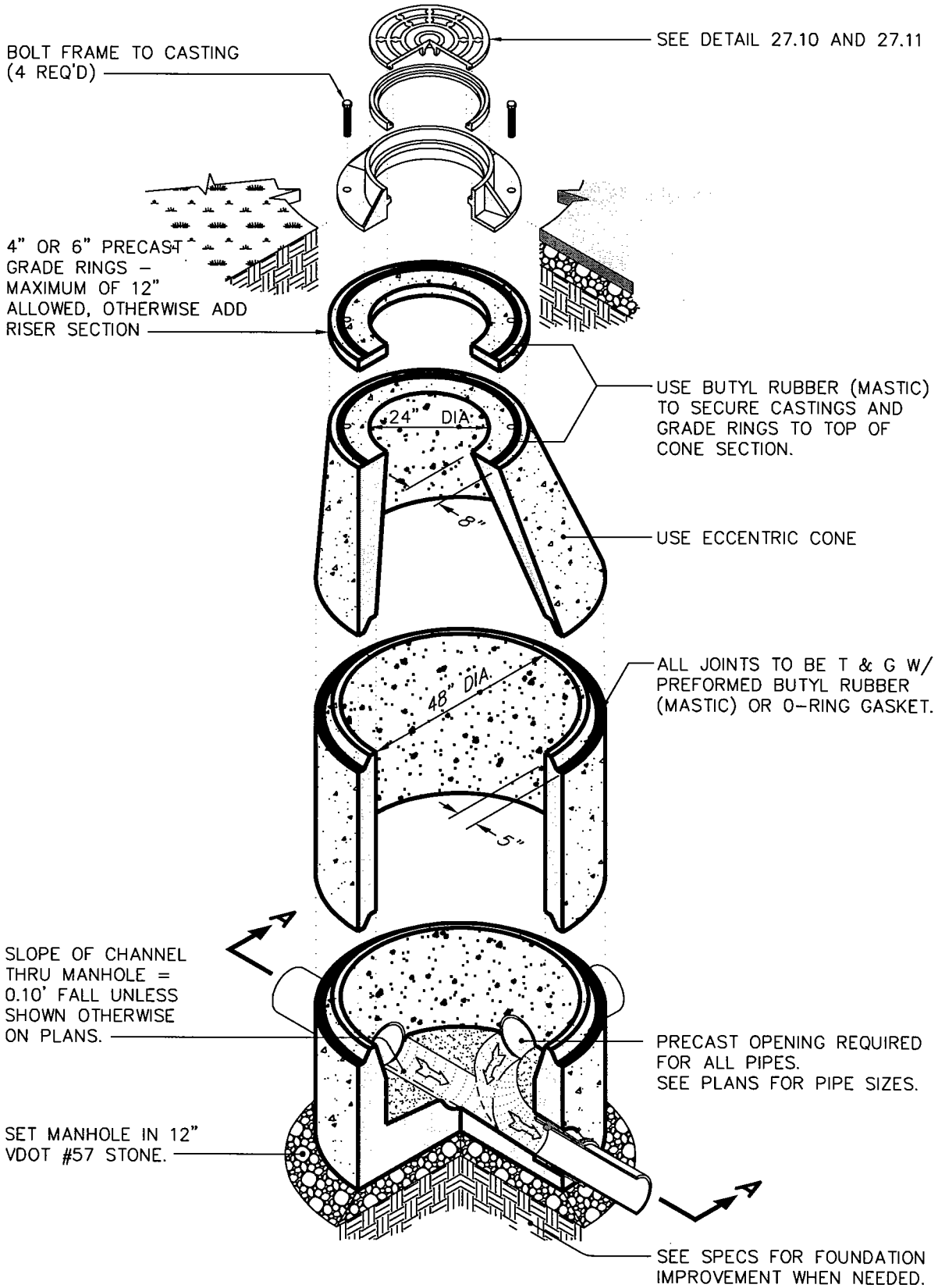
DETAIL #	SHEETS	DESCRIPTION
27.01	SHEET 1:1	SANITARY SEWER LINE TRENCH DETAIL
27.02	SHEET 1:2	PRECAST CONCRETE 4' DIAMETER MANHOLE
27.02	SHEET 2:2	PRECAST CONCRETE 4' DIAMETER MANHOLE
27.03	SHEET 1:2	STANDARD 4' DIAMETER PRECAST FLAT TOP MANHOLE
27.03	SHEET 2:2	STANDARD 4' DIAMETER PRECAST FLAT TOP MANHOLE
27.04	SHEET 1:1	STANDARD INTERIOR DROP MANHOLE
27.05	SHEET 1:1	STANDARD EXTERIOR DROP MANHOLE
27.06	SHEET 1:2	STANDARD MANHOLE VENTING PIPE DETAIL
27.06	SHEET 2:2	STANDARD MANHOLE VENTING PIPE DETAIL
27.07	SHEET 1:2	PRECAST CONCRETE DOGHOUSE MANHOLE
27.07	SHEET 2:2	PRECAST CONCRETE DOGHOUSE MANHOLE
27.08		RESERVED FOR FUTURE USE
27.09	SHEET 1:1	LAMPSTACK FRAME and COVER
27.10	SHEET 1:1	STANDARD MANHOLE FRAME and COVER (SANITARY)
27.11	SHEET 1:1	STANDARD WATERPROOF FRAME and COVER (SANITARY)
27.12		RESERVED FOR FUTURE USE
27.13	SHEET 1:1	STANDARD LAMPSTACK
27.14	SHEET 1:1	BUILDING CONNECTION HORIZONTAL WYE
27.15	SHEET 1:1	TYPICAL PVC SEWER LATERAL CLEANOUT WITH IN-LINE WYE
27.16	SHEET 1:1	TYPICAL LATERAL SADDLE DETAIL
27.17	SHEET 1:2	PIPE SUPPORT PIER FOR DRY LAND CROSSING
27.17	SHEET 2:2	PIPE SUPPORT PIER FOR DRY LAND CROSSING
27.18	SHEET 1:2	PIPE SUPPORT FOR WATER CROSSING
27.18	SHEET 2:2	PIPE SUPPORT FOR WATER CROSSING
27.19	SHEET 1:2	SEWER LINE CROSSING BENEATH STREAM BED
27.19	SHEET 2:2	SEWER LINE CROSSING BENEATH STREAM BED
27.20		RESERVED FOR FUTURE USE
27.21	SHEET 1:1	CONCRETE RESTRAINING ANCHOR
27.22	SHEET 1:1	PERMANENT STREAM FORDING DETAIL
27.23	SHEET 1:2	STEEL ENCASEMENT DETAIL
27.23	SHEET 2:2	STEEL ENCASEMENT DETAIL



NOTES:

1. FOUNDATION STONE SHALL BE REQUIRED WHEN SOIL CONDITIONS ARE UNSUITABLE.
2. EXTRA DEPTH EXCAVATION SHALL BE PAID FOR AS ANYTHING BEYOND 4' OF COVER TO TOP OF PIPE.
3. AN ADDITIONAL 1 INCH DEPTH OF BEDDING MATERIAL WILL BE REQUIRED FOR EACH ADDITIONAL 2 FEET OF TRENCH DEPTH IN EXCESS OF 16 FEET UP TO A MAXIMUM OF 12 INCHES.

THE CITY OF LYNCHBURG			
SANITARY SEWER LINE TRENCH DETAIL		SCALE: NOT TO SCALE	DETAIL # 27.01
		REVISION DATE: 04-10-03	SHEET #: 1 OF 1
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY			

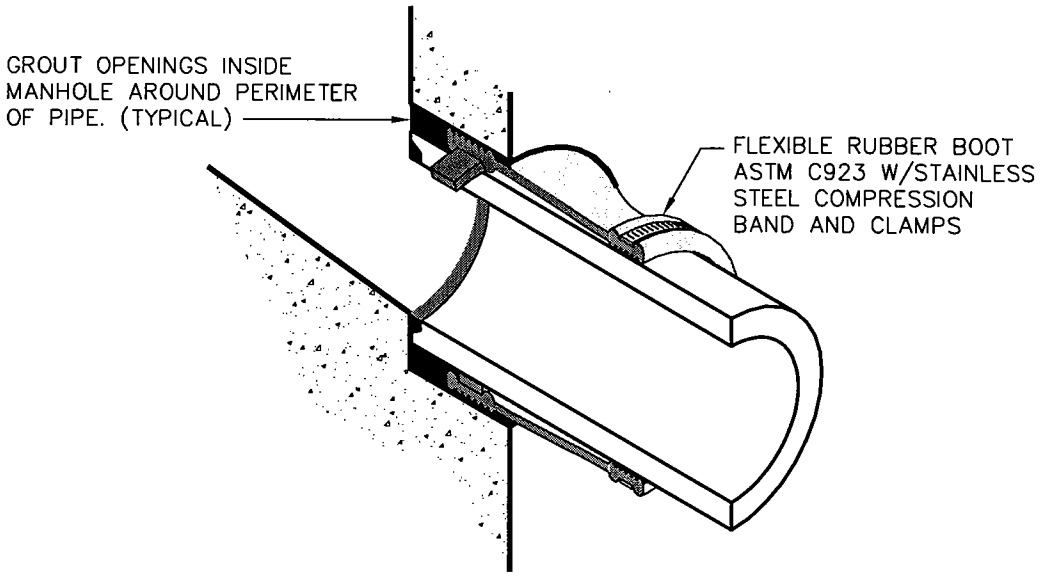


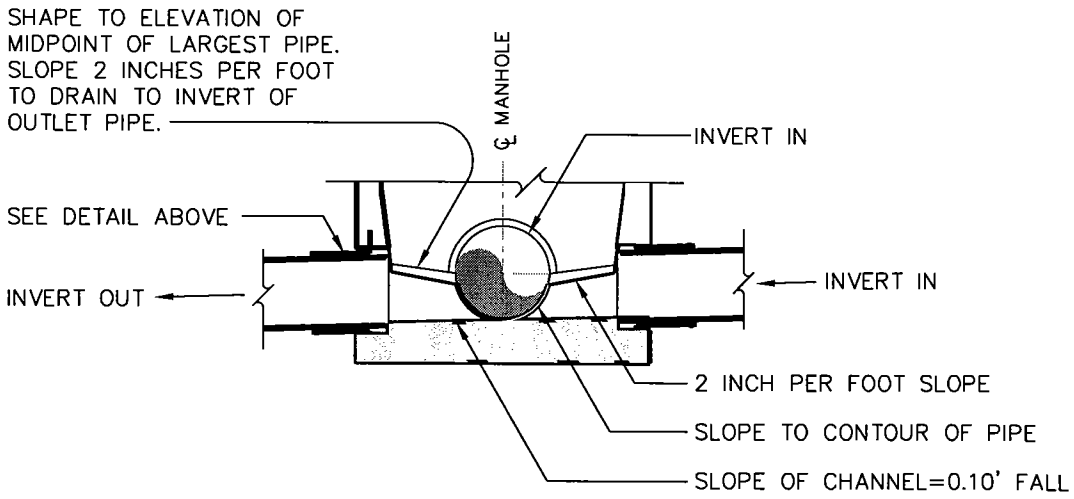
THE CITY OF LYNCHBURG

PRECAST CONCRETE 4' DIAMETER MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.02
REVISION DATE:	SHEET #:
04-10-03	1 OF 2





SECTION A-A

NOTES:

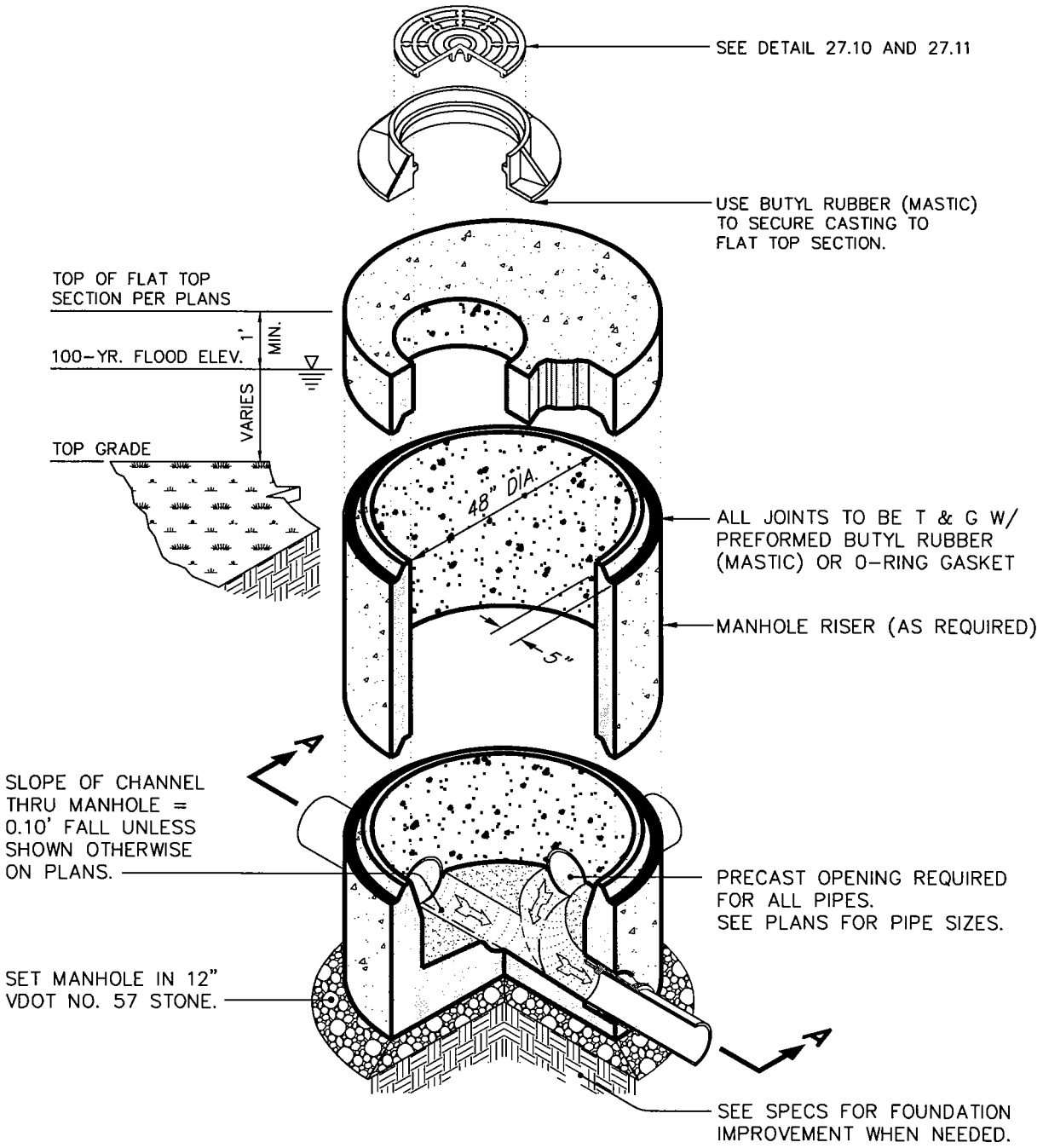
1. ALL SERVICE LATERALS INTO MANHOLE TO BE CORE DRILLED AND BOOTED.
2. MAXIMUM DEPTH 4' DIAMETER MANHOLE = 20' (SEE SEWER DESIGN SECTION FOR OTHER REQUIREMENTS / LIMITATIONS).
3. THE INVERT SHAPING AS SHOWN SHALL CONSIST OF 3,000 PSI CONCRETE TROWELLED TO A SMOOTH SURFACE WITH NO AGGREGATE EXPOSED.
4. DETAILS OF INVERT SHAPING AS SHOWN HEREON ARE FOR EXAMPLE PURPOSES ONLY. EACH MANHOLE IS TO BE SHAPED INDIVIDUALLY TO BEST FIT THE PARTICULAR INLET AND OUTLET CONFIGURATION AND FLOW LINES.
5. WHEN DIFFERENT DIAMETER PIPES ARE USED FROM INVERT IN TO INVERT OUT, PROVIDE A SMOOTH TRANSITION THROUGH THE INVERT.

THE CITY OF LYNCHBURG

PRECAST CONCRETE 4' DIAMETER MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.02
REVISION DATE:	SHEET #:
04-10-03	2 OF 2

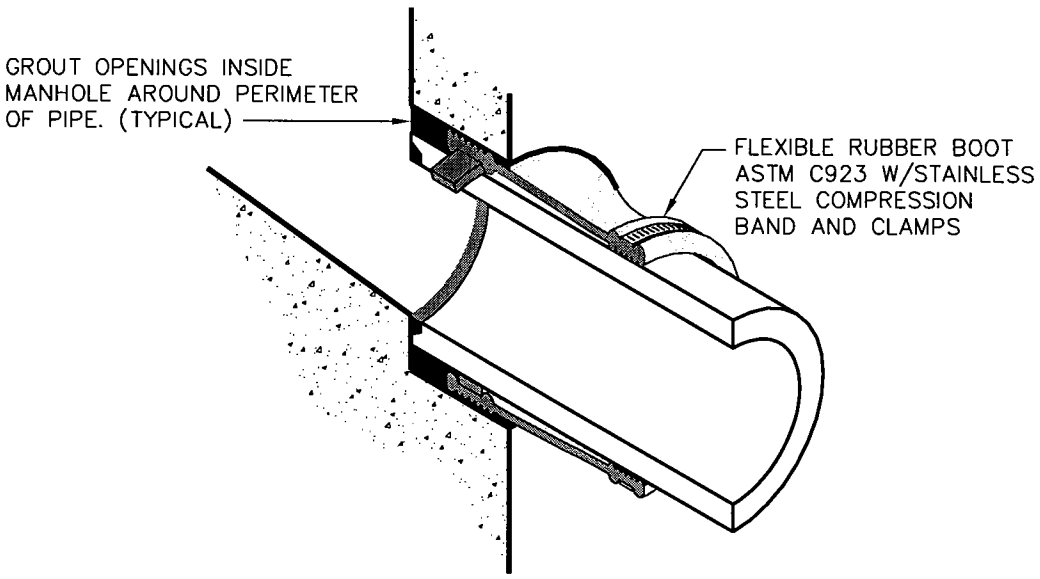


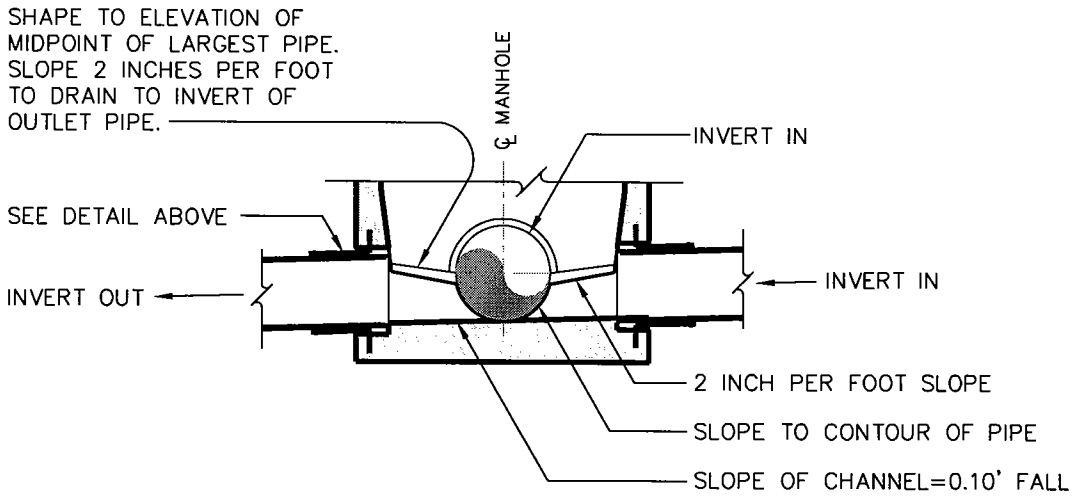
THE CITY OF LYNCHBURG

STANDARD 4' DIA. PRECAST FLAT TOP MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.03
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



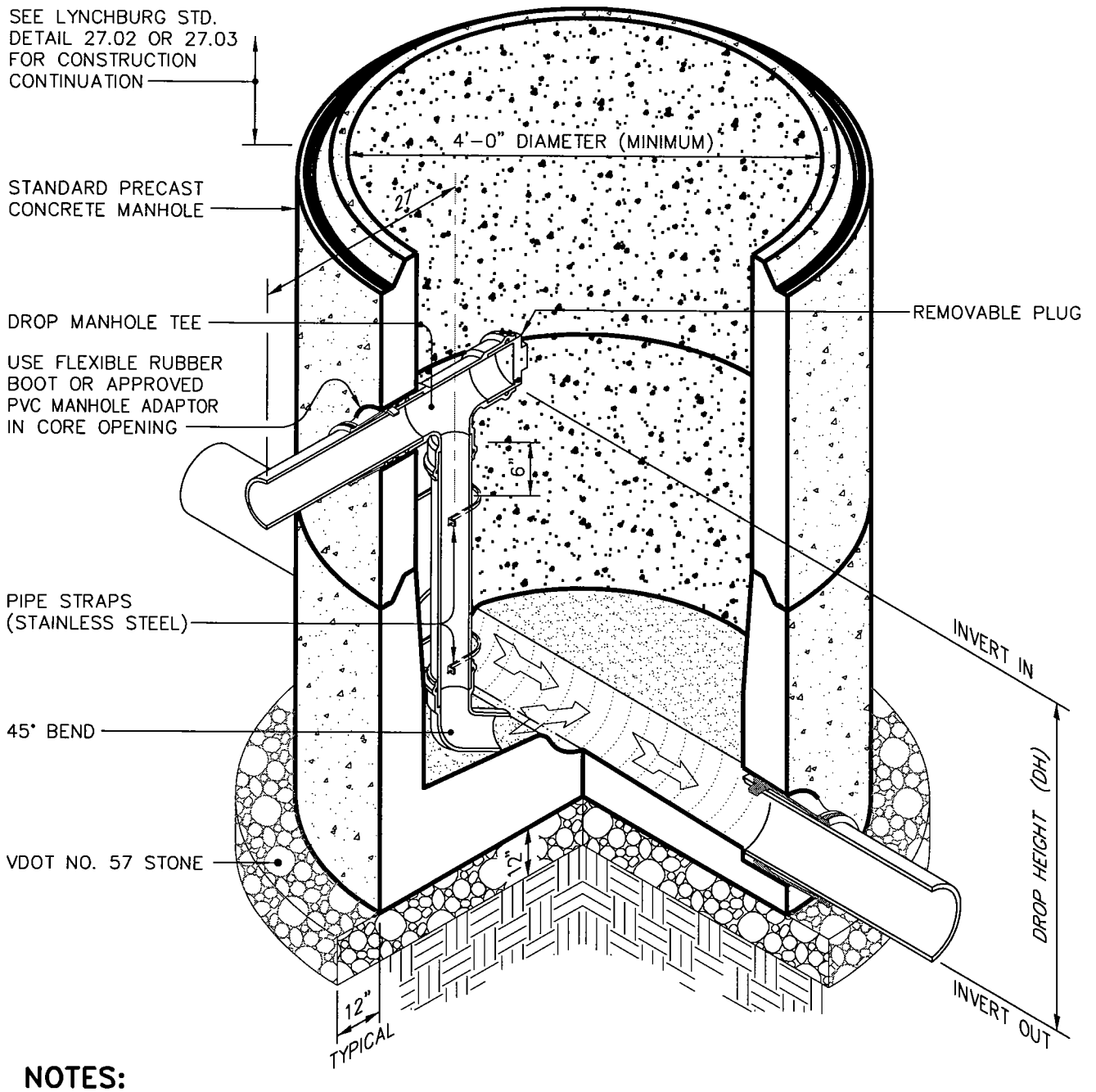


SECTION A–A

NOTES:

1. ALL SERVICE LATERALS INTO MANHOLE TO BE CORE DRILLED AND BOOTED.
2. MAXIMUM DEPTH 4' DIAMETER MANHOLE = 20' (SEE SEWER DESIGN SECTION FOR OTHER REQUIREMENTS / LIMITATIONS).
3. THE INVERT SHAPING AS SHOWN SHALL CONSIST OF 3,000 PSI CONCRETE TROWELLED TO A SMOOTH SURFACE WITH NO AGGREGATE EXPOSED.
4. DETAILS OF INVERT SHAPING AS SHOWN HEREON ARE FOR EXAMPLE PURPOSES ONLY. EACH MANHOLE IS TO BE SHAPED INDIVIDUALLY TO BEST FIT THE PARTICULAR INLET AND OUTLET CONFIGURATION AND FLOW LINES.
5. WHEN DIFFERENT DIAMETER PIPES ARE USED FROM INVERT IN TO INVERT OUT, PROVIDE A SMOOTH TRANSITION THROUGH THE INVERT.
6. FLAT TOP MANHOLE MAY BE USED FOR SHALLOW INSTALLATIONS AS APPROVED BY CITY ENGINEER.

THE CITY OF LYNCHBURG			
STANDARD 4' DIA. PRECAST FLAT TOP MANHOLE		SCALE: NOT TO SCALE	DETAIL # 27.03
		REVISION DATE: 04-10-03	SHEET #: 2 OF 2
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY			



NOTES:

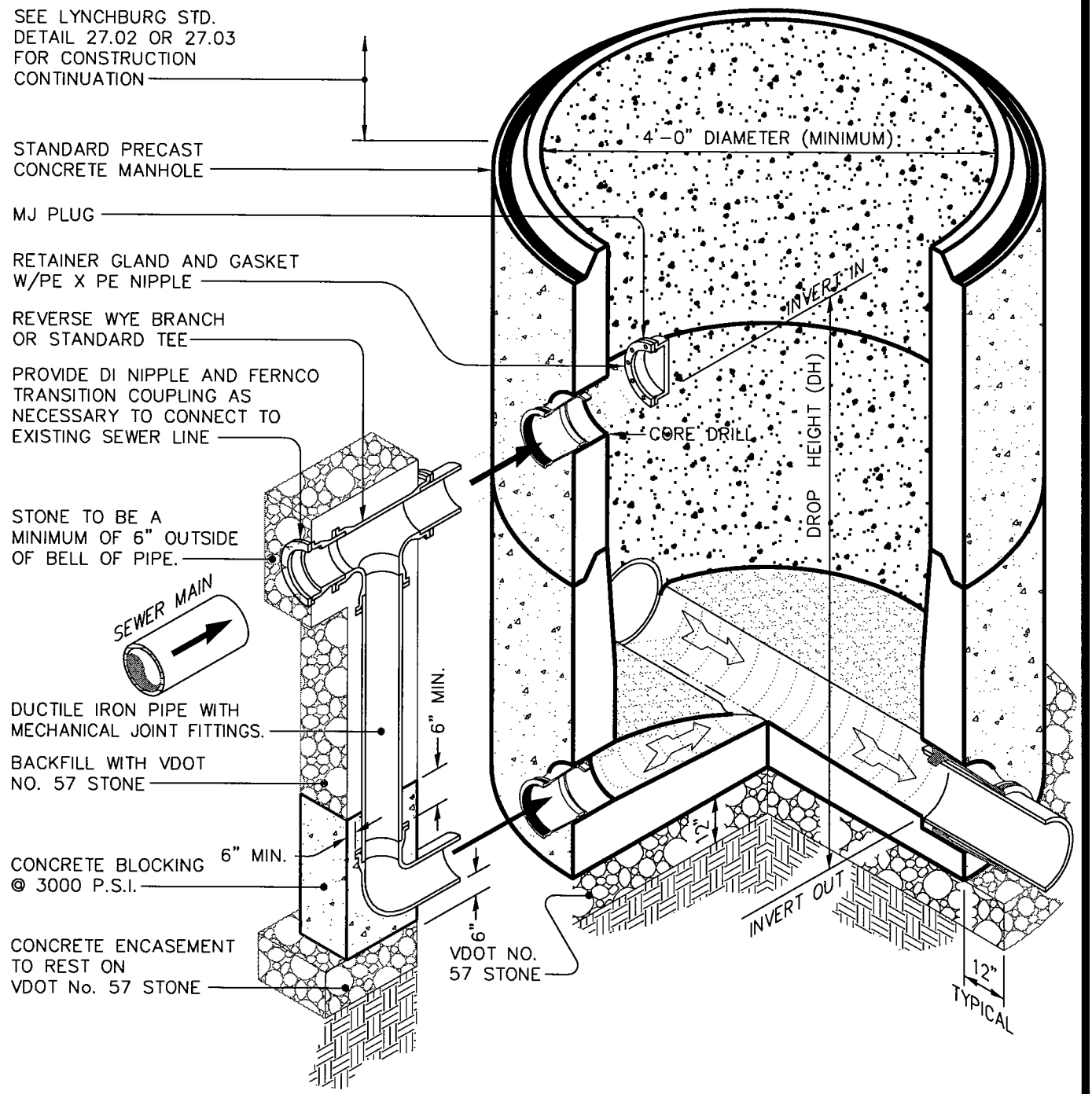
1. ALL THRU PIPE SHALL BE FITTED WITH SCH. 40 PVC REMOVABLE PLUG.
2. ALL PLUGS SHALL BE SECURED TO THE DROP FITTING WITH 2 FEET OF GALVANIZED CHAIN SECURED WITH TWO STEEL MACHINE SCREWS, NUTS, AND WASHERS.
3. DROP STACK TO BE SCH. 40 PVC PIPE.
4. DROP STACK WILL BE STRAPPED TO MANHOLE AT PIPE JOINTS. STRAPS AND FASTENERS TO BE MADE OF STAINLESS STEEL.
5. ELBOW AT BOTTOM OF THE STACK WILL BE A 45° BEND POSITIONED IN THE DIRECTION OF THE FLOW WITH BENCH CONSTRUCTED TO CONFORM TO MANHOLE BENCH.

THE CITY OF LYNCHBURG

STANDARD INTERIOR DROP MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.04
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

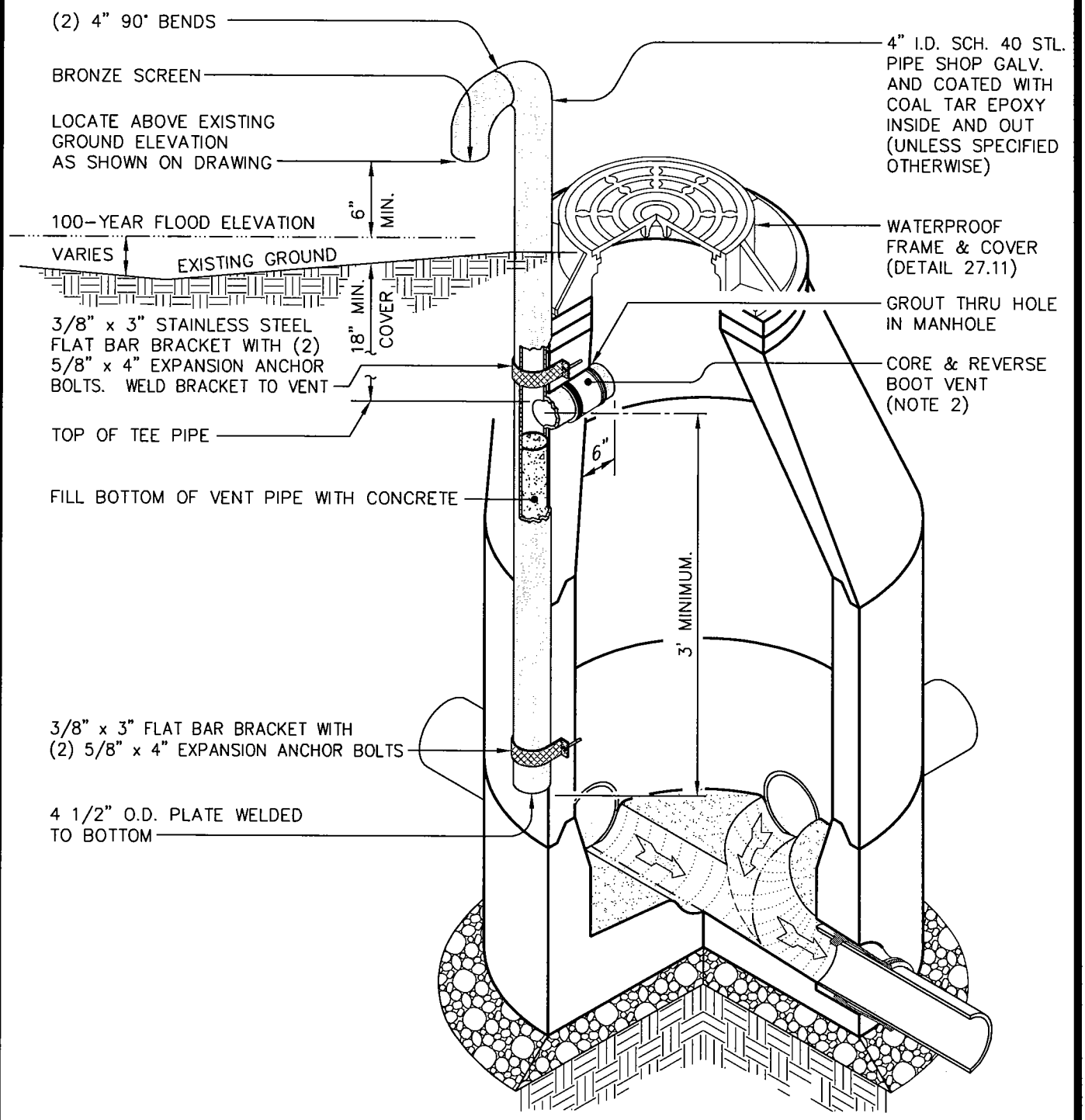


THE CITY OF LYNCHBURG

STANDARD EXTERIOR DROP MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.05
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

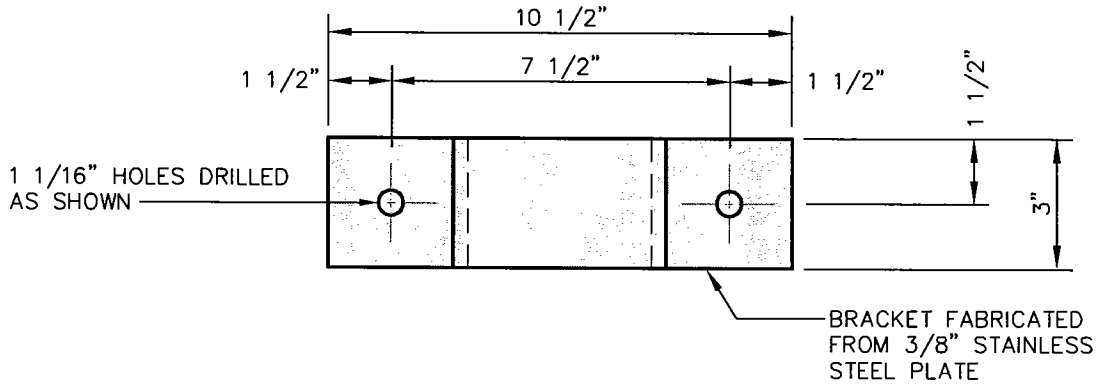
1. LOCATE VENT PIPE AS SHOWN OR AS DIRECTED BY CITY ENGINEER.
2. CONNECT 4" STEEL VENT PIPE TO MANHOLE WITH FLEXIBLE BOOT.

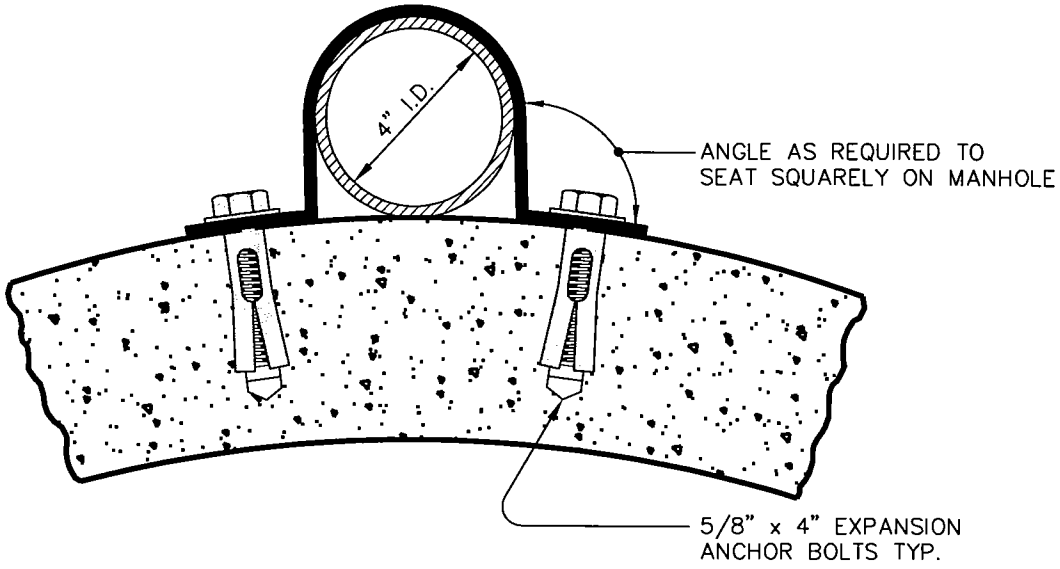
THE CITY OF LYNCHBURG

STANDARD MANHOLE VENTING PIPE DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.06
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



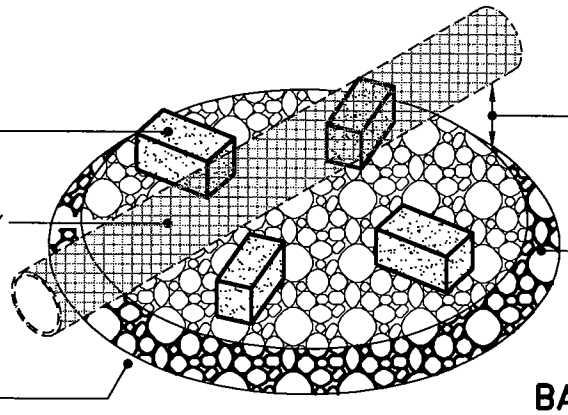


THE CITY OF LYNCHBURG

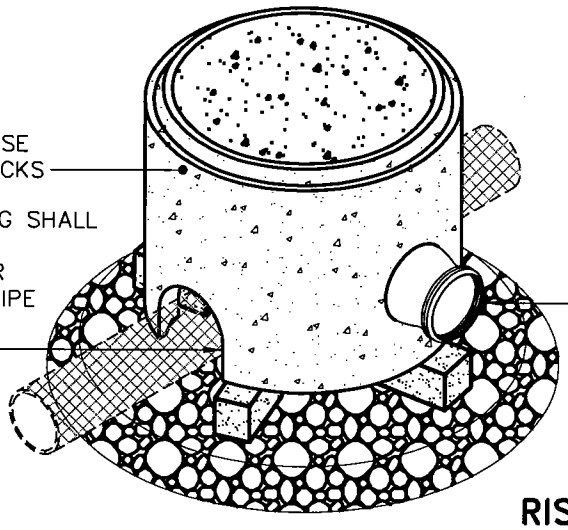
STANDARD MANHOLE VENTING PIPE DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

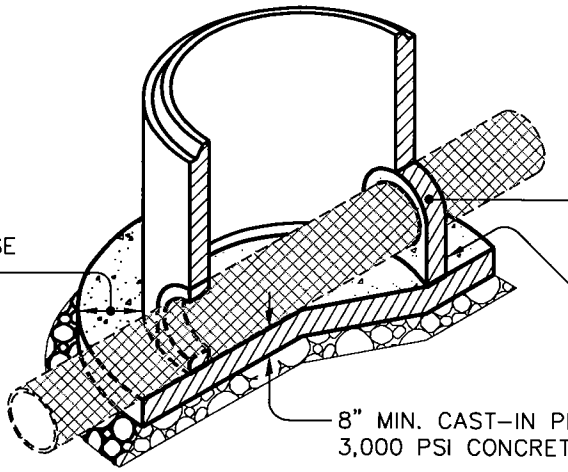
SCALE:	DETAIL #
NOT TO SCALE	27.06
REVISION DATE:	SHEET #:
04-10-03	2 OF 2



BASE ISOMETRIC VIEW



RISER ISOMETRIC VIEW



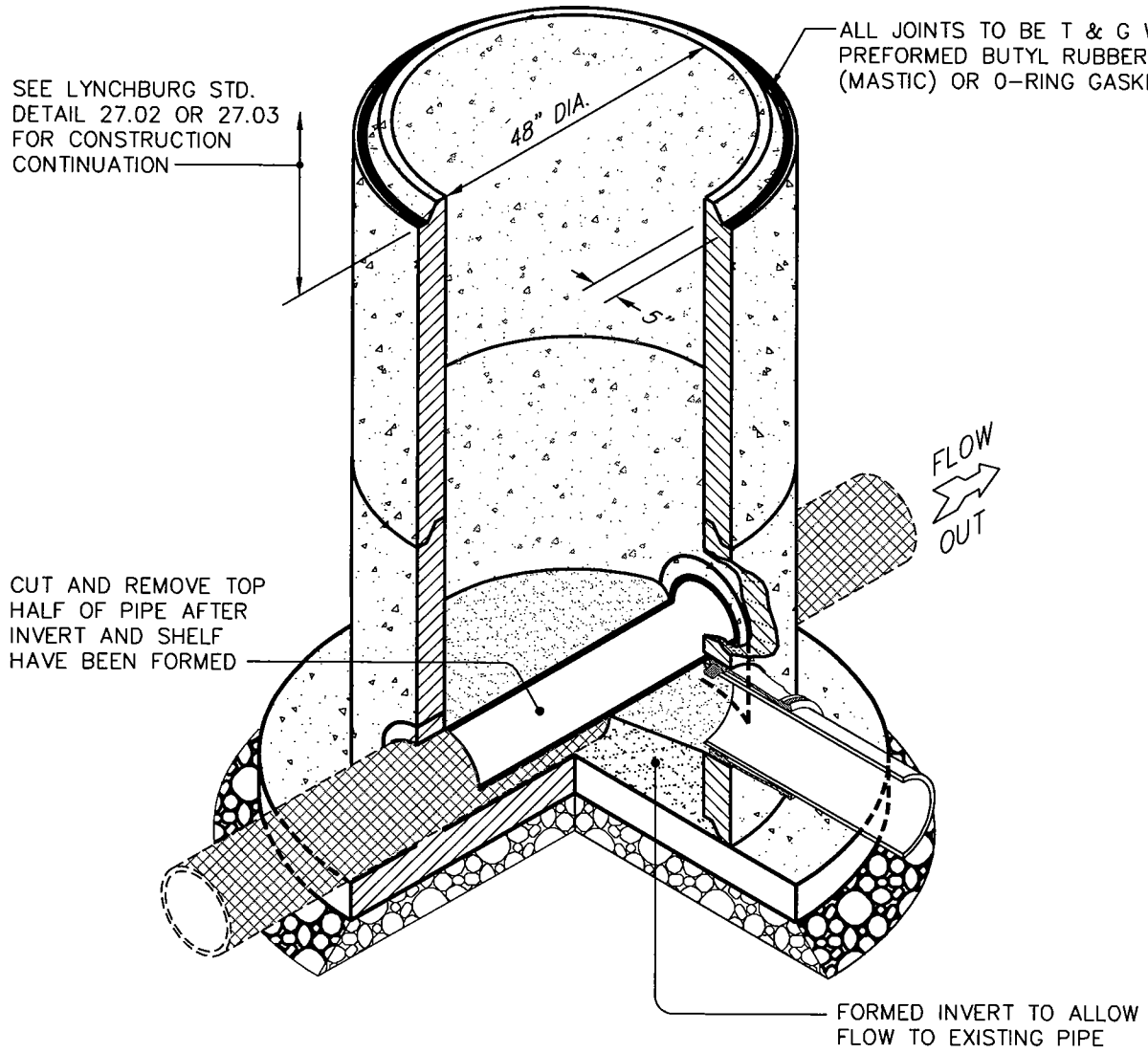
FOUNDATION SECTION VIEW

THE CITY OF LYNCHBURG

PRECAST CONCRETE DOGHOUSE MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.07
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



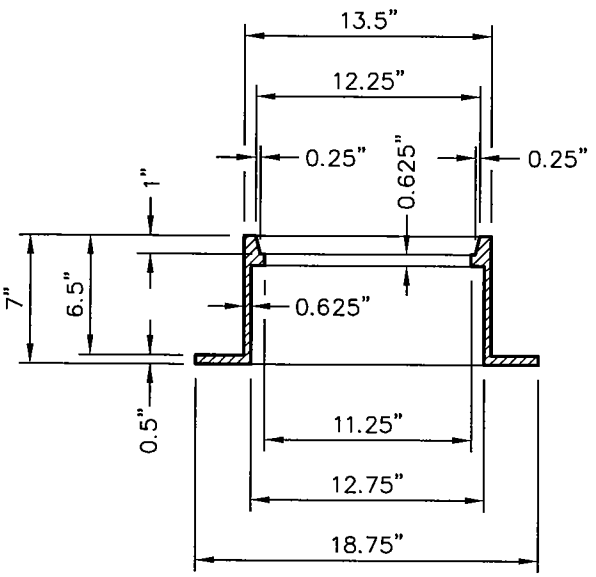
INVERT SECTION VIEW

NOTES:

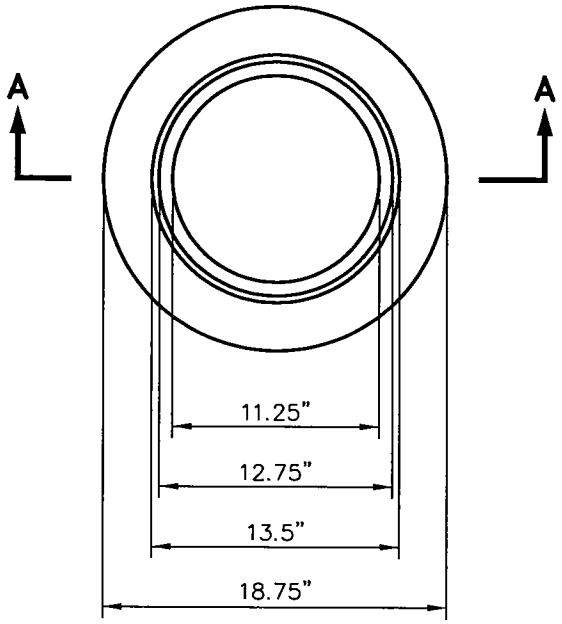
1. ALL SERVICE LATERALS INTO MANHOLE TO BE CORE DRILLED AND BOOTED.
2. MAXIMUM DEPTH 4' DIA. MANHOLE = 20' (SEE SPECIFICATIONS).

THE CITY OF LYNCHBURG		
PRECAST CONCRETE DOGHOUSE MANHOLE	SCALE: NOT TO SCALE	DETAIL # 27.07
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY	REVISION DATE: 04-10-03	SHEET #: 2 OF 2

FRAME

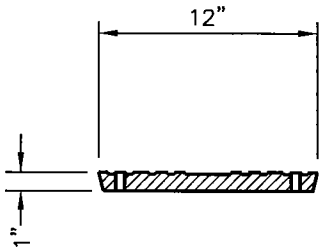


SECTION A-A

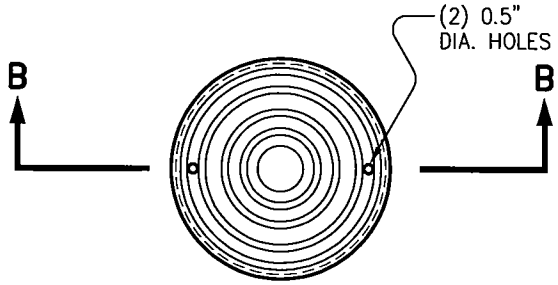


PLAN VIEW

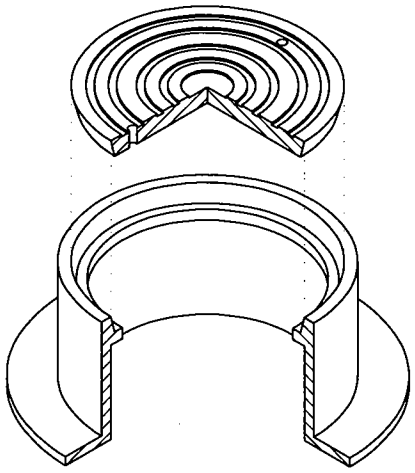
COVER



SECTION B-B



PLAN VIEW



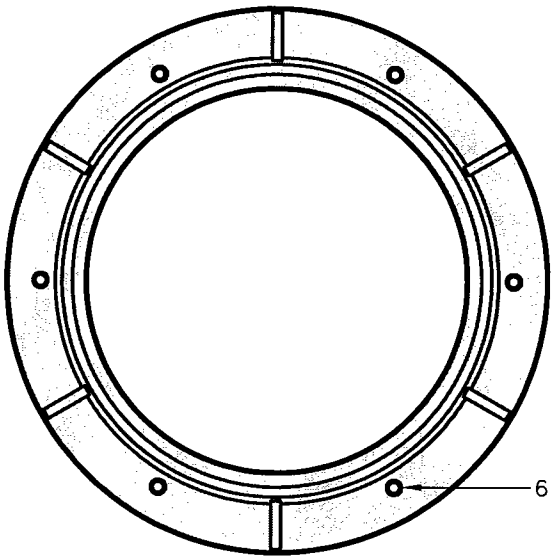
ISOMETRIC VIEW

THE CITY OF LYNCHBURG

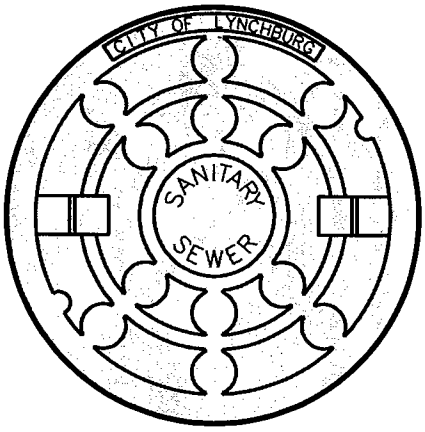
LAMPSTACK
FRAME and COVER

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

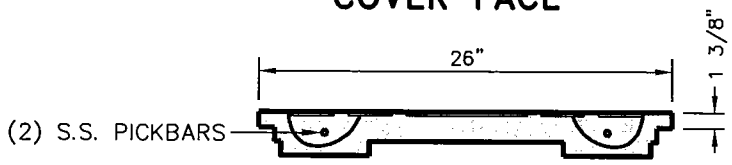
SCALE:	DETAIL #
NOT TO SCALE	27.09
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



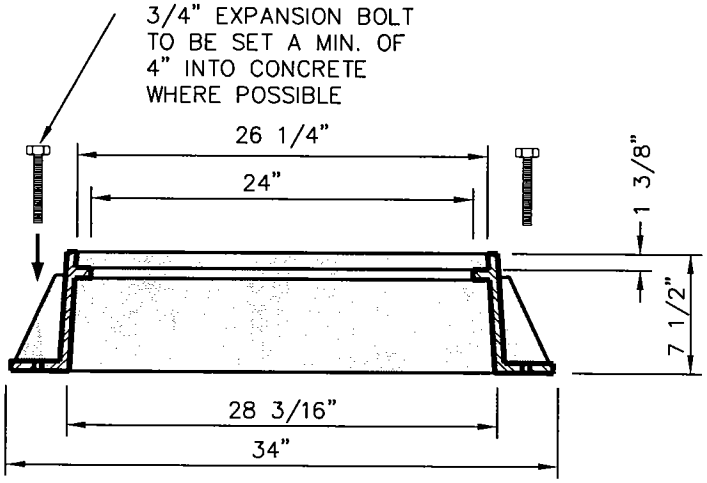
FRAME TOP VIEW



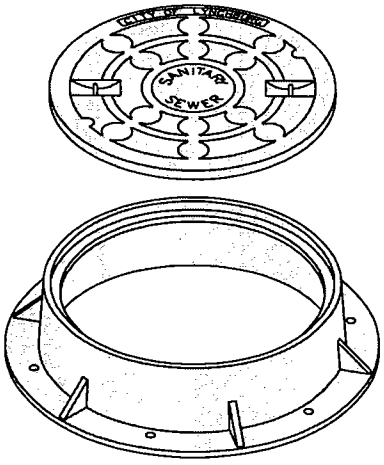
COVER FACE



COVER SECTION



FRAME SECTION



ISOMETRIC

NOTES:

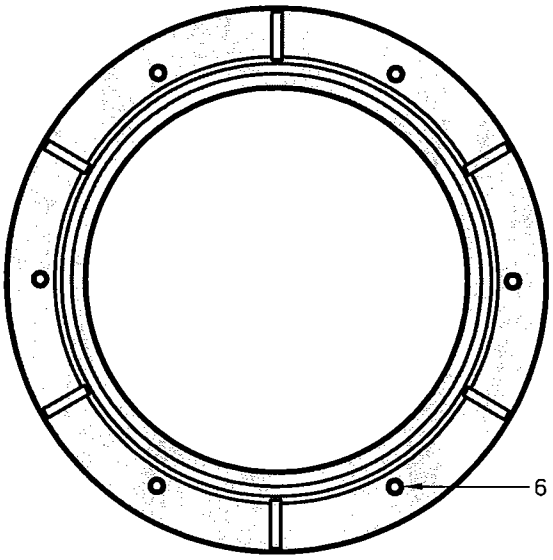
1. PARTS #'s: US FOUNDRY 710 RING AND DP COVER, EAST JORDAN IRON WORKS OR APPROVED EQUAL.
2. MANHOLE FRAMES AND COVERS SHALL BE ROADWAY TYPE WITH DEEP SOCKET COVERS. MACHINE FRAMES AND COVERS TO PREVENT RATTLING. CASTINGS SHALL BE GRAY IRON MEETING REQUIREMENTS OF ASTM A48, CLASS 30.

THE CITY OF LYNCHBURG

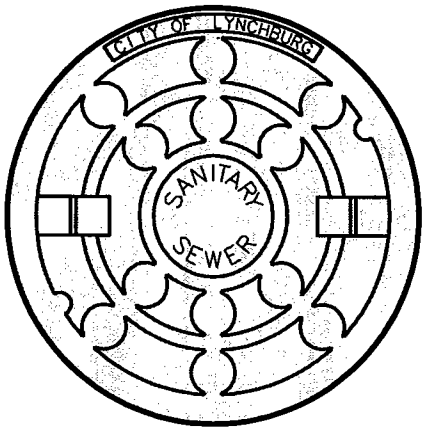
STANDARD MANHOLE FRAME and COVER

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

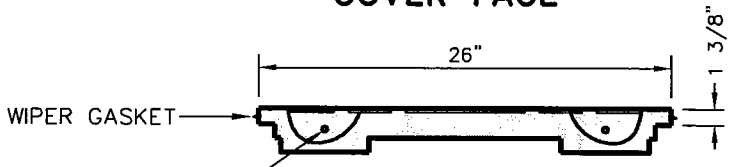
SCALE:	DETAIL #
NOT TO SCALE	27.10
REVISION DATE:	SHEET #:
8-22-2003	1 OF 1



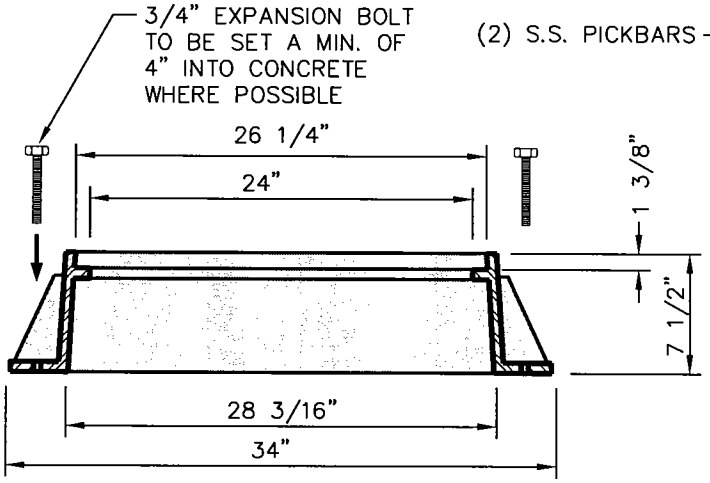
FRAME TOP VIEW



COVER FACE



COVER SECTION



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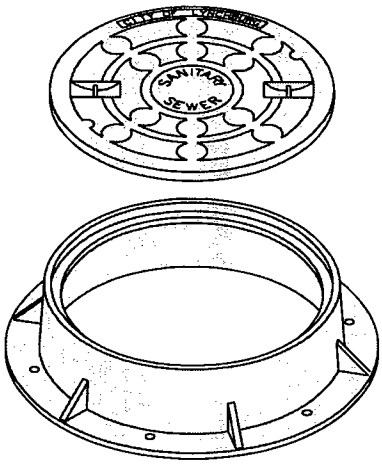


ISOMETRIC

NOTES:

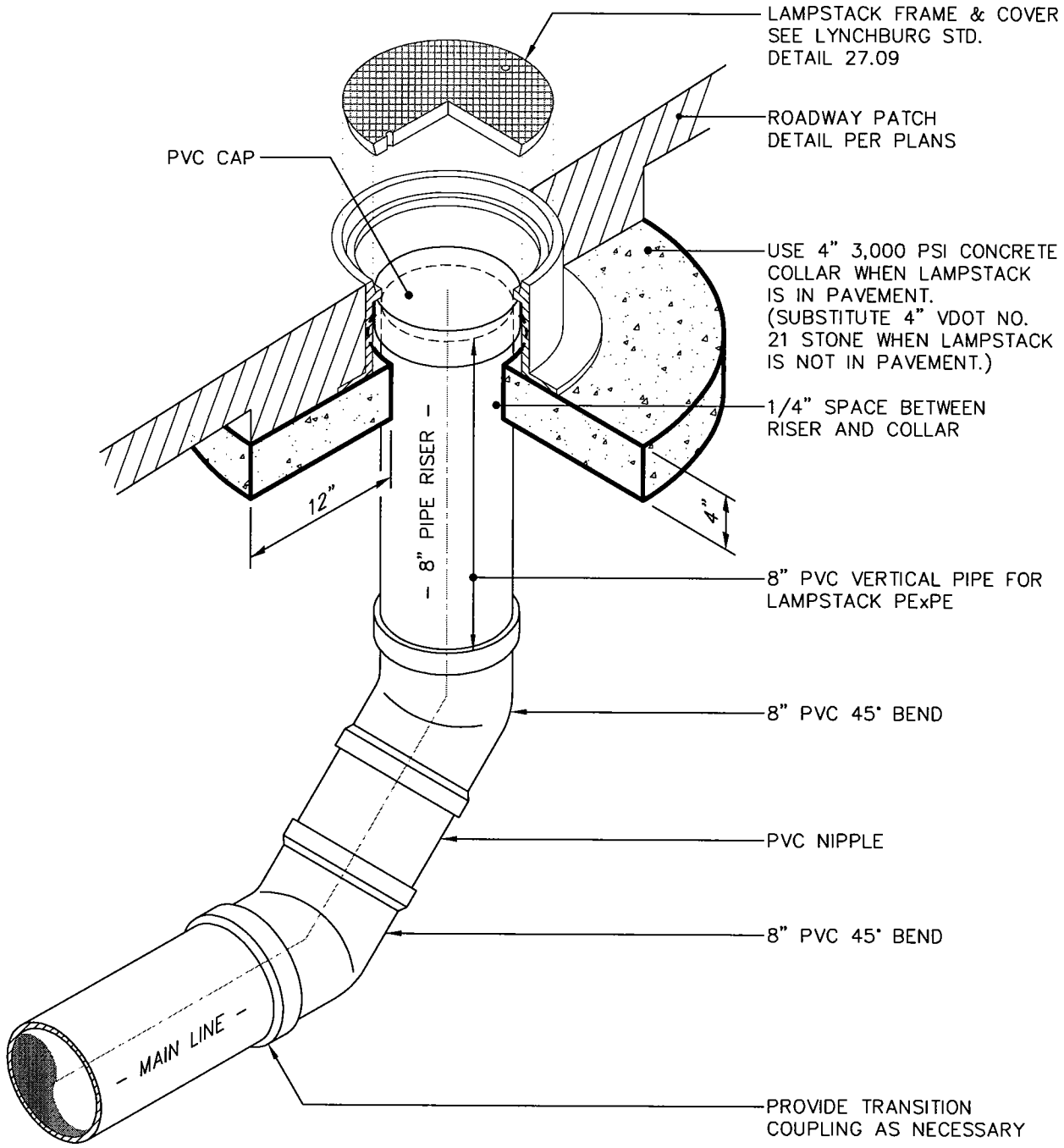
1. PARTS #'s: US FOUNDRY 710 RING AN DP–SSG COVER, EAST JORDAN IRON WORKS 2027 FRAME AND COVER WITH WIPER GASKET, OR APPROVED EQUAL.
2. MANHOLE FRAMES AND COVERS SHALL BE ROADWAY TYPE WITH DEEP SOCKET COVERS. MACHINE FRAMES AND COVERS TO PREVENT RATTLING. CASTINGS SHALL BE GRAY IRON MEETING REQUIREMENTS OF ASTM A48, CLASS 30.

THE CITY OF LYNCHBURG

STANDARD WATERPROOF MANHOLE FRAME and COVER

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.11
REVISION DATE:	SHEET #:
8-22-2003	1 OF 1

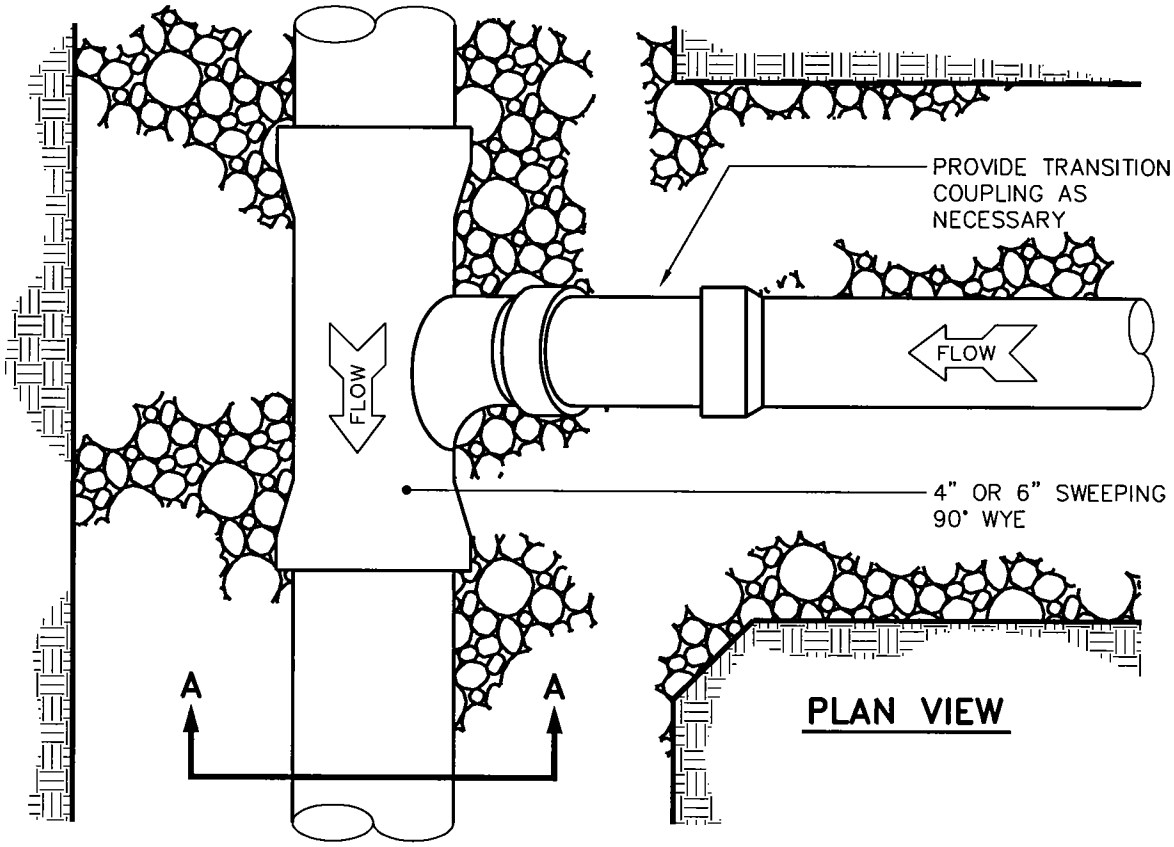


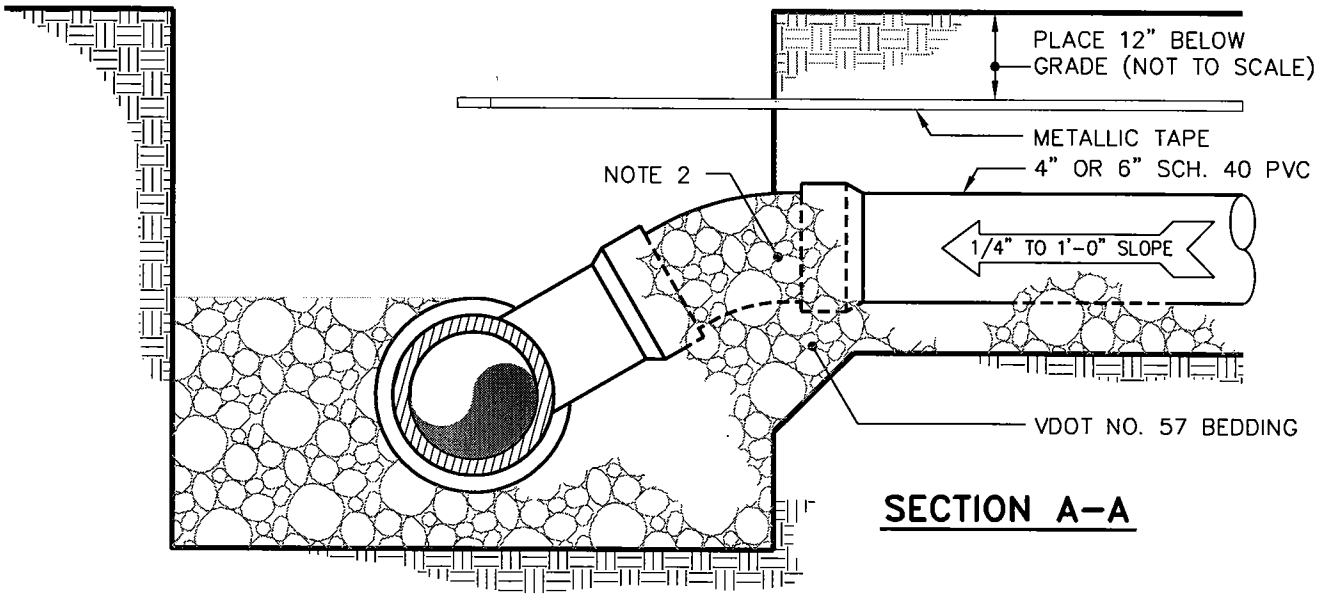
THE CITY OF LYNCHBURG

STANDARD LAMPSTACK

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.13
REVISION DATE:	SHEET #:
04-10-03	1 OF 1





NOTES:

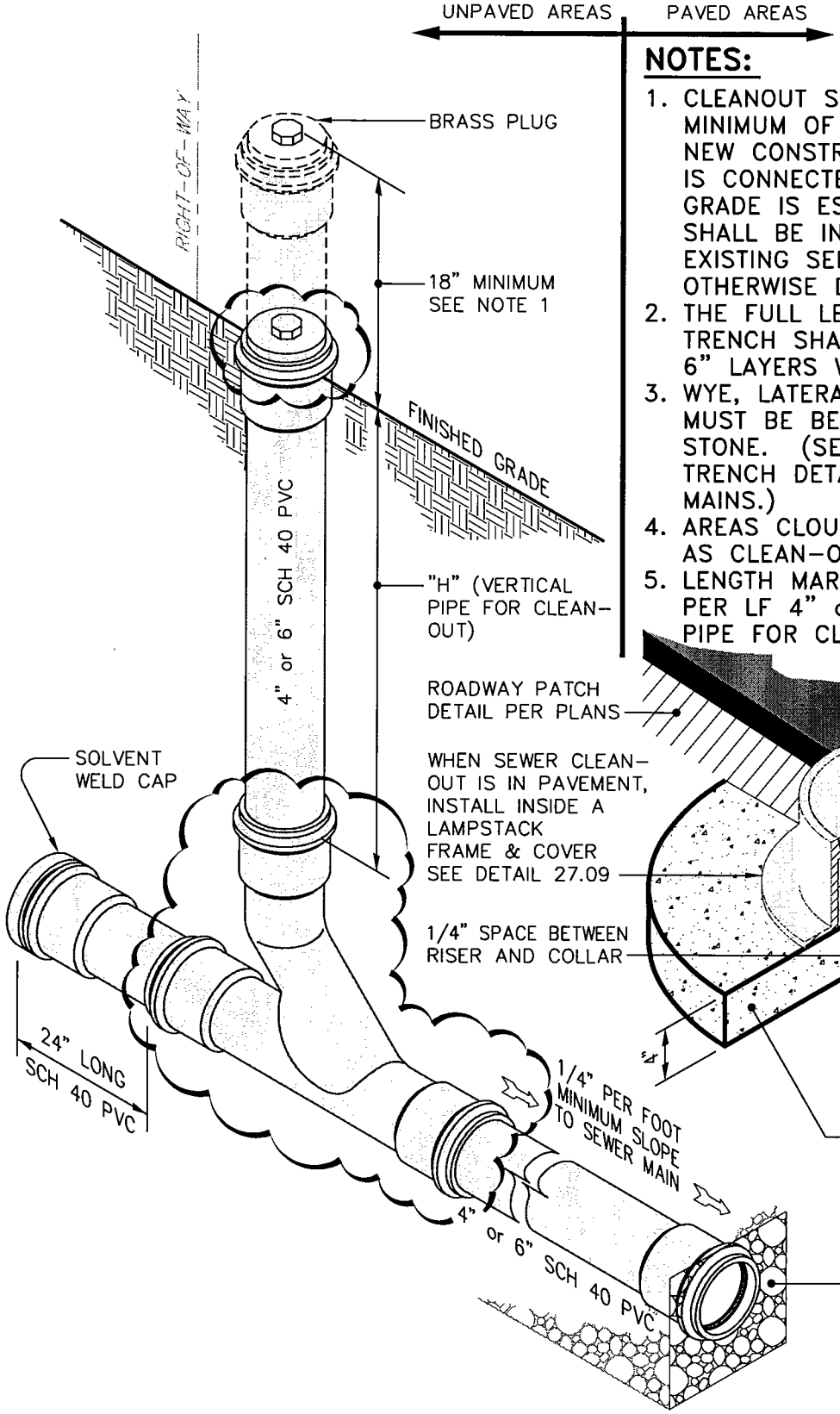
1. STONE SHALL BE INSTALLED TO TOP OF PIPE FOR PVC PIPE.
   STONE SHALL BE INSTALLED TO D/8 FOR DI PIPE.

THE CITY OF LYNCHBURG

BUILDING CONNECTION HORIZONTAL WYE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.14
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

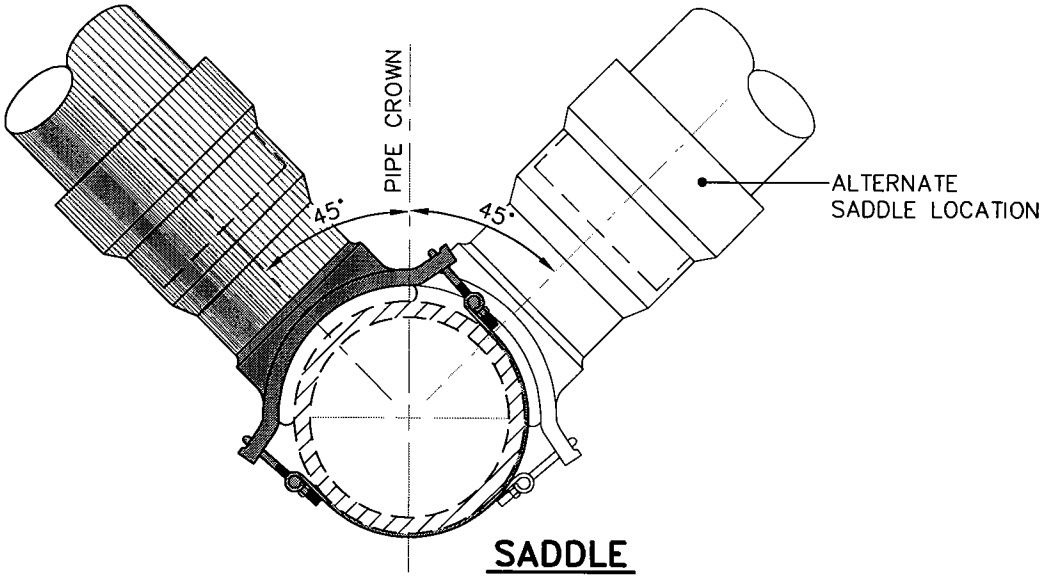
1. CLEANOUT STACK SHALL EXTEND A MINIMUM OF 18" ABOVE GRADE FOR NEW CONSTRUCTION UNTIL SERVICE IS CONNECTED AND/OR FINISH GRADE IS ESTABLISHED. CLEANOUTS SHALL BE INSTALLED AT GRADE FOR EXISTING SERVICES UNLESS OTHERWISE DIRECTED.
2. THE FULL LENGTH OF THE SERVICE TRENCH SHALL BE COMPACTED IN 6" LAYERS WITH MECHANICAL TAMP.
3. WYE, LATERAL, & C.O. ASSEMBLY MUST BE BEDDED IN VDOT NO. 57 STONE. (SEE SANITARY SEWER LINE TRENCH DETAIL 27.01 FOR GRAVITY MAINS.)
4. AREAS CLOUDED ARE TO BE PAID AS CLEAN-OUT ASSEMBLY
5. LENGTH MARKED "H" TO BE PAID PER LF 4" or 6" PVC VERTICAL PIPE FOR CLEAN-OUT.

THE CITY OF LYNCHBURG

TYPICAL PVC SEWER LATERAL CLEANOUT WITH IN-LINE WYE

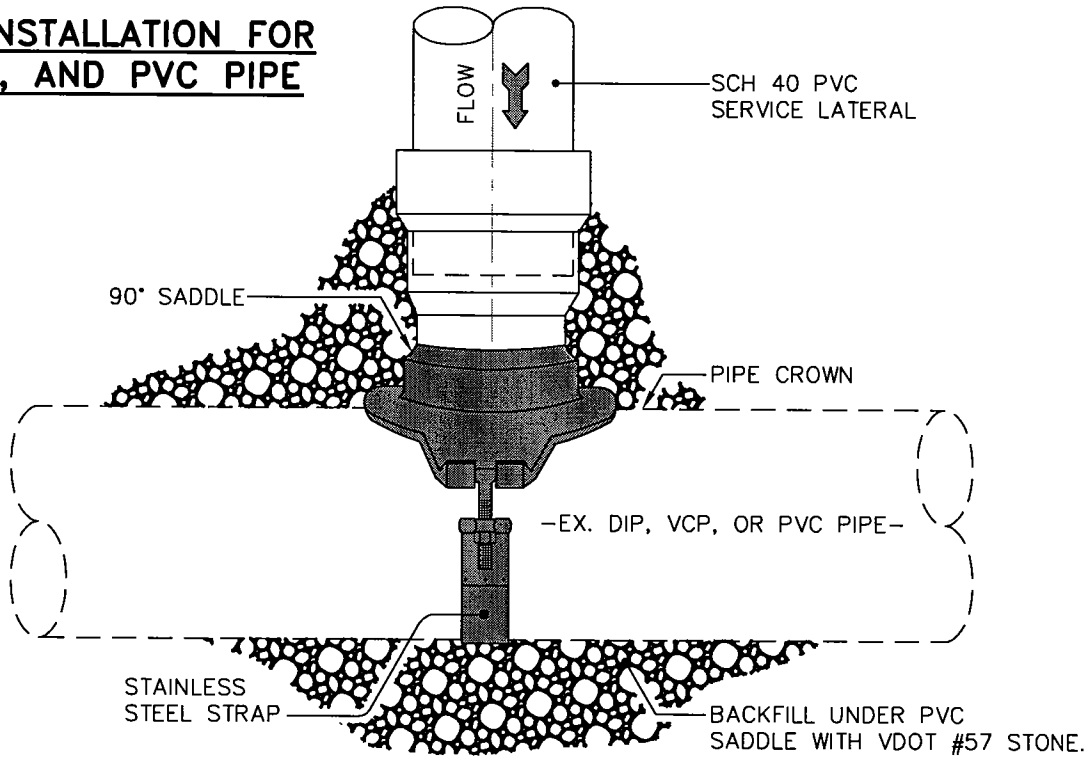
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.15
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



SADDLE INSTALLATION

SADDLE INSTALLATION FOR DIP, VCP, AND PVC PIPE

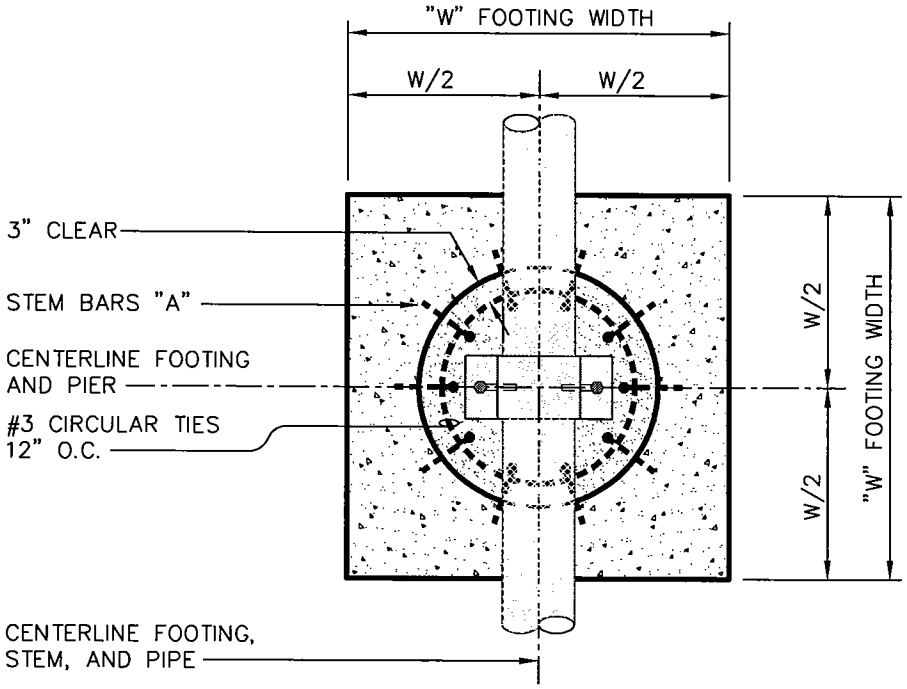


THE CITY OF LYNCHBURG

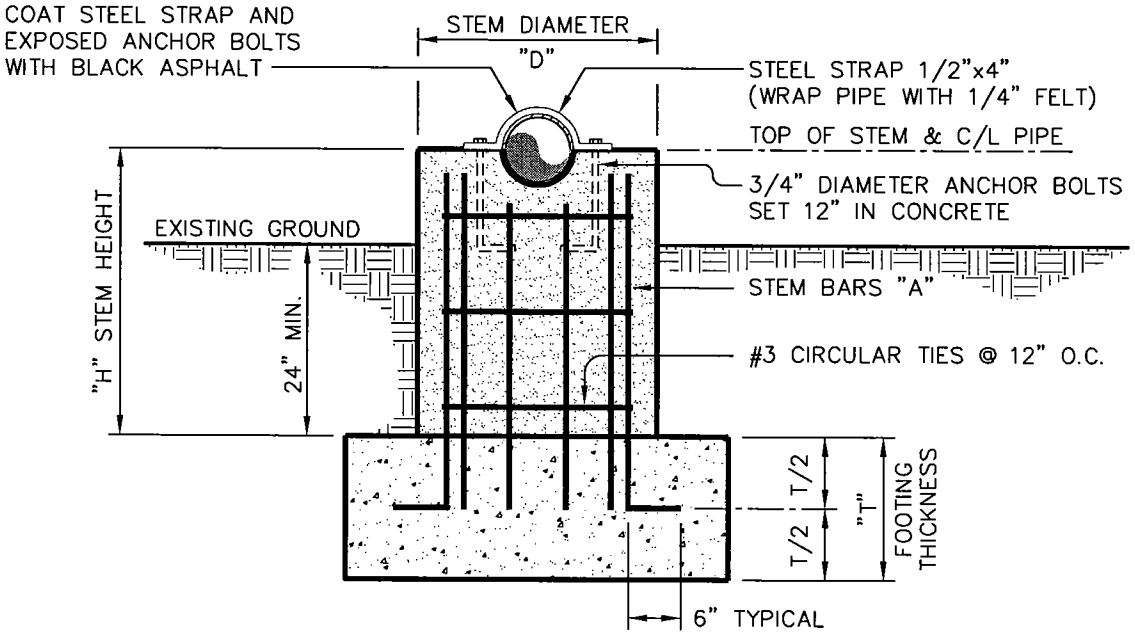
TYPICAL LATERAL SADDLE DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.16
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



PLAN



ELEVATION

NOTES:

1. AN ALTERNATE DESIGN MAY BE SUBMITTED FOR REVIEW BY THE CITY ENGINEER.

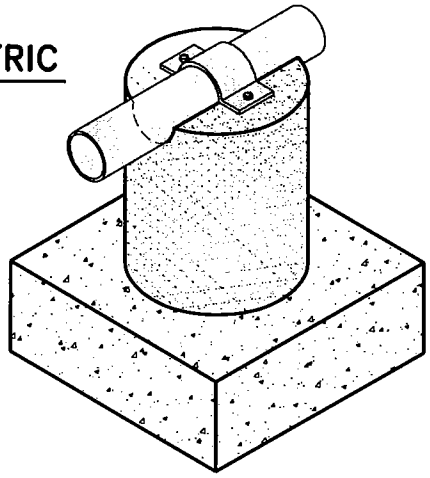
THE CITY OF LYNCHBURG

PIPE SUPPORT PIER FOR DRY LAND CROSSING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.17
REVISION DATE:	SHEET #:
04-10-03	1 OF 2

ISOMETRIC



PIPE SUPPORT PIER FOR DRY LAND CROSSING								
PIPE DIAMETER	STEM DIAMETER "D"	STEM HEIGHT "H"	STEM REINF. BARS "A"	FOOTING SIZE		STEM CONC. VOL. / VERT. FT. CU. YARDS	STEM STEEL WT./ VERT. FT. POUNDS	FOOTING CONC. VOL. CU. YARDS
				"W"	"T"			
8" TO 10"	2'–6"	1'–3' 4'–6' 7'–9' 10'–12'	10#4 10#5 10#5 10#6	4'–0" 5'–0" 6'–0" 7'–0"	1'–6" 2'–0" 2'–0" 2'–6"	0.18	6.68 10.43 10.43 15.02	0.89 1.85 2.67 4.54
12" TO 16"	3'–0"	1'–3' 4'–6' 7'–9' 10'–12'	10#4 10#5 10#6 10#8	5'–0" 6'–0" 7'–0" 8'–0"	1'–6" 2'–0" 2'–6" 2'–6"	0.26	6.68 10.43 15.02 26.70	1.39 2.67 4.54 5.92
18" TO 24"	3'–6"	1'–3' 4'–6' 7'–9' 10'–12'	14#5 14#6 14#6 14#8	6'–0" 7'–0" 8'–0" 9'–0"	2'–0" 2'–6" 3'–0" 3'–0"	0.36	14.60 21.03 21.03 37.38	2.67 4.54 7.11 9.00

NOTES:

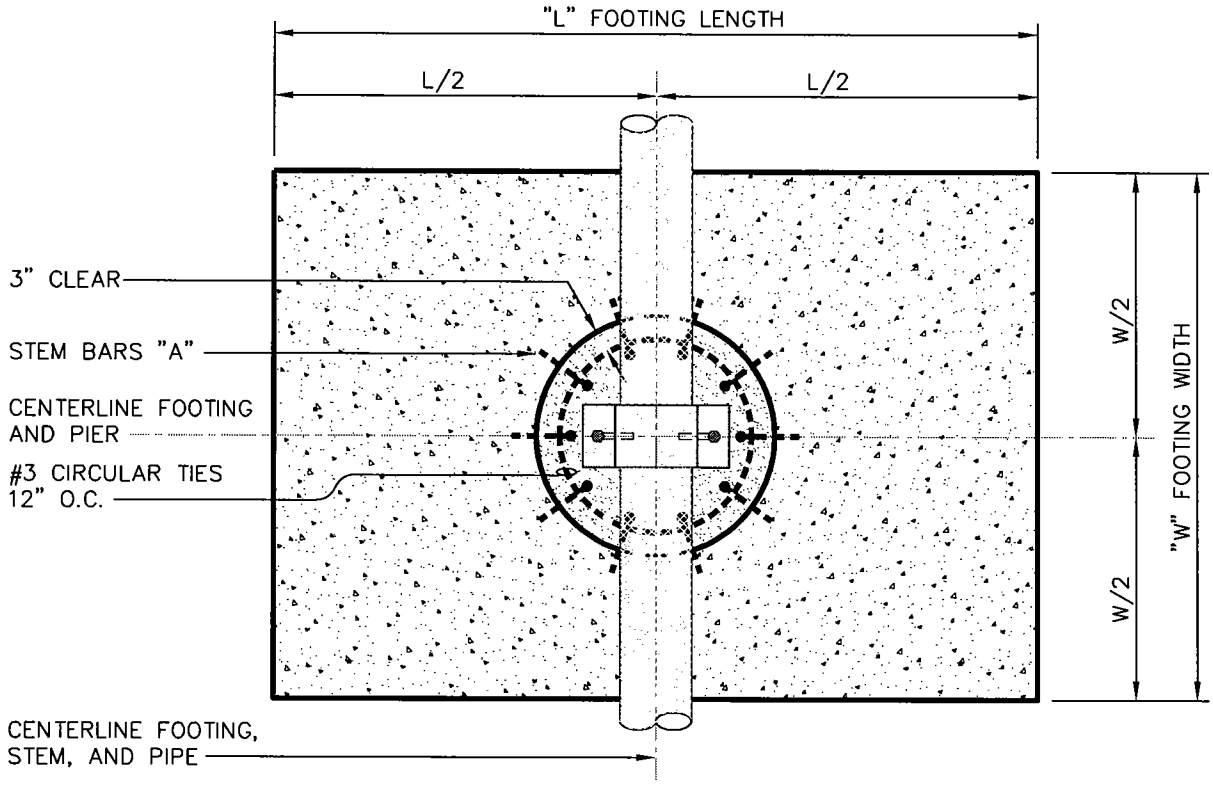
1. MINIMUM SOIL BEARING CAPACITY REQUIRED = 3,000 PSF. ENGINEER SHALL INSPECT ALL FOOTINGS PRIOR TO PLACEMENT OF CONCRETE.
2. CONCRETE – 3,000 PSI @ 28 DAYS.
3. REINFORCING – ASTM A615, GRADE 60.

THE CITY OF LYNCHBURG

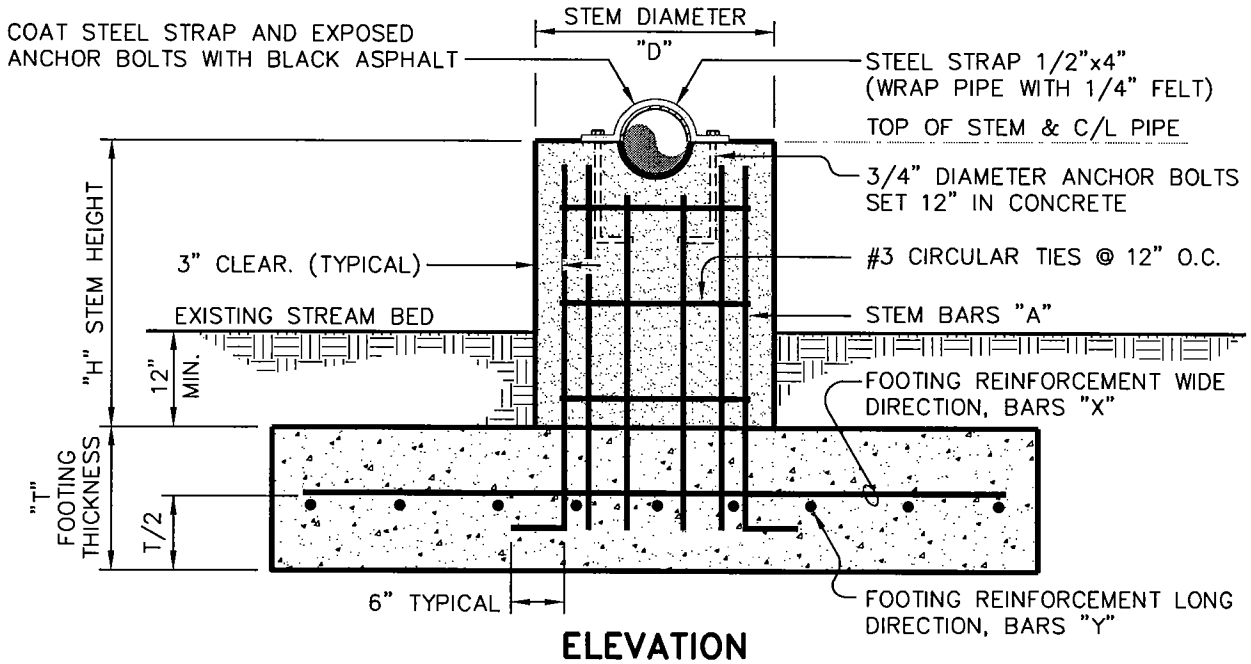
PIPE SUPPORT PIER FOR DRY LAND CROSSING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.17
REVISION DATE:	SHEET #:
10-21-04	2 OF 2



PLAN



ELEVATION

NOTES:

1. AN ALTERNATE DESIGN MAY BE SUBMITTED FOR REVIEW BY THE CITY ENGINEER.

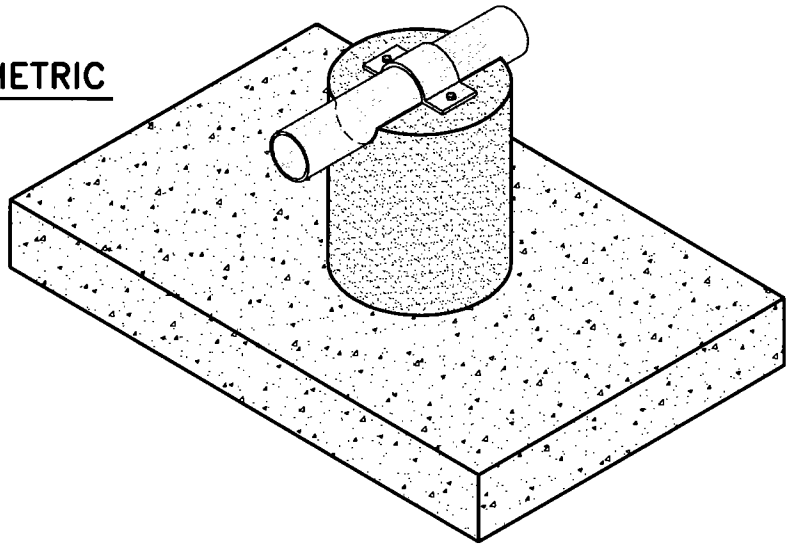
THE CITY OF LYNCHBURG

PIPE SUPPORT PIER for WATER CROSSING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.18
REVISION DATE:	SHEET #:
04-10-03	1 OF 2

ISOMETRIC



PIPE SUPPORT PIER FOR WATER CROSSING

PIPE DIAMETER	STEM DIAMETER "D"	STEM HEIGHT "H"	STEM REINF. BARS "A"	FOOTING SIZE "L"	FOOTING SIZE "T"	FOOTING SIZE "W"	FOOTING REINF. BARS "X" (L)	FOOTING REINF, BARS "Y" (W)	STEM CONC. VOL. / VERT. FT. CU. YARDS	STEM STEEL WT./ VERT. FT. LBS.	FOOTING CONC. VOL. CU. YARDS	FOOTING STEEL WT./ VERT. FT. LBS.
8" TO 10"	2–6"	1'–3"	10#4	8'–0"	2'–0"	5'–6'	6#5	9#4	0.18	9.04	3.26	77.0
		4'–6'	10#5	10'–0"	2'–6"	5'–0"	6#5	11#4		12.79	4.63	92.5
		7'–9'	10#5	11'–0"	2'–8"	6'–0"	7#6	12#5		12.79	6.52	179.2
		10'–12'	10#6	12'–0"	3'–0"	7'–0"	8#6	13#5		17.38	9.33	226.3
12" TO 16"	3'–0"	1'–3'	10#4	10'–0"	2'–6"	5'–0"	6#5	11#4	0.26	9.63	4.63	92.5
		4'–6'	10#5	12'–0"	2'–8"	5'–0"	6#6	13#5		13.38	5.92	164.6
		7'–9'	10#6	13'–0"	3'–0"	6'–0"	7#7	14#5		17.97	8.67	259.2
		10'–12'	10#8	14'–0"	3'–0"	6'–0"	7#8	15#6		26.65	9.33	376.2
18" TO 20"	3'–6"	1'–3'	14#5	11'–0"	2'–6"	5'–0"	6#5	12#5	0.36	18.14	5.09	122.0
		4'–6'	14#6	12'–0"	3'–0"	6'–0"	7#6	13#5		24.57	8.00	195.5
		7'–9'	14#6	14'–0"	3'–0"	6'–0"	7#7	15#6		24.57	9.33	317.1
		10'–12'	14#8	15'–0"	3'–6"	6'–0"	7#8	16#6		40.92	11.67	403.2
24"	3'–6"	1'–3'	14#5	11'–0"	2'–6"	6'–0"	7#5	12#5	0.36	18.14	6.11	145.5
		4'–6'	14#6	13'–0"	3'–0"	6'–0"	7#6	14#6		24.57	8.67	247.1
		7'–9'	14#6	14'–0"	3'–4"	7'–0"	8#7	15#6		24.57	12.10	367.2
		10'–12'	14#8	15'–0"	4'–0"	7'–0"	8#8	16#6		40.92	15.56	465.9

NOTES:

1. MINIMUM SOIL BEARING CAPACITY REQUIRED = 3,000 PSF. ENGINEER SHALL INSPECT ALL FOOTINGS PRIOR TO PLACEMENT OF CONCRETE.
2. CONCRETE – 3,000 PSI @ 28 DAYS.
3. REINFORCING – ATSM A615, GRADE 60.
4. FOOTING TO BE PLACED SO THAT SIDE IS PARALLEL TO DIRECTION OF STREAM FLOW AT FLOOD STAGE.
5. IF FOOTING IS PLACED DIRECTLY ON SOLID ROCK, 1" DIA. DOWELS TO BE PLACED IN ROCK TO CONNECT FOOTING TO ROCK AND PREVENT SLIDING. DOWELS TO BE PLACED ON 24" CENTERS IN EACH DIRECTION.
6. SUPPORT SIZE BASED ON 15 FPS STREAM FLOW WITH EMPTY (BUOYANT) PIPE.
7. FOR VELOCITIES >15 FPS, PIERS SHALL BE DESIGNED BY LICENSED PROFESSIONAL ENGINEER.

THE CITY OF LYNCHBURG

PIPE SUPPORT PIER FOR WATER CROSSING

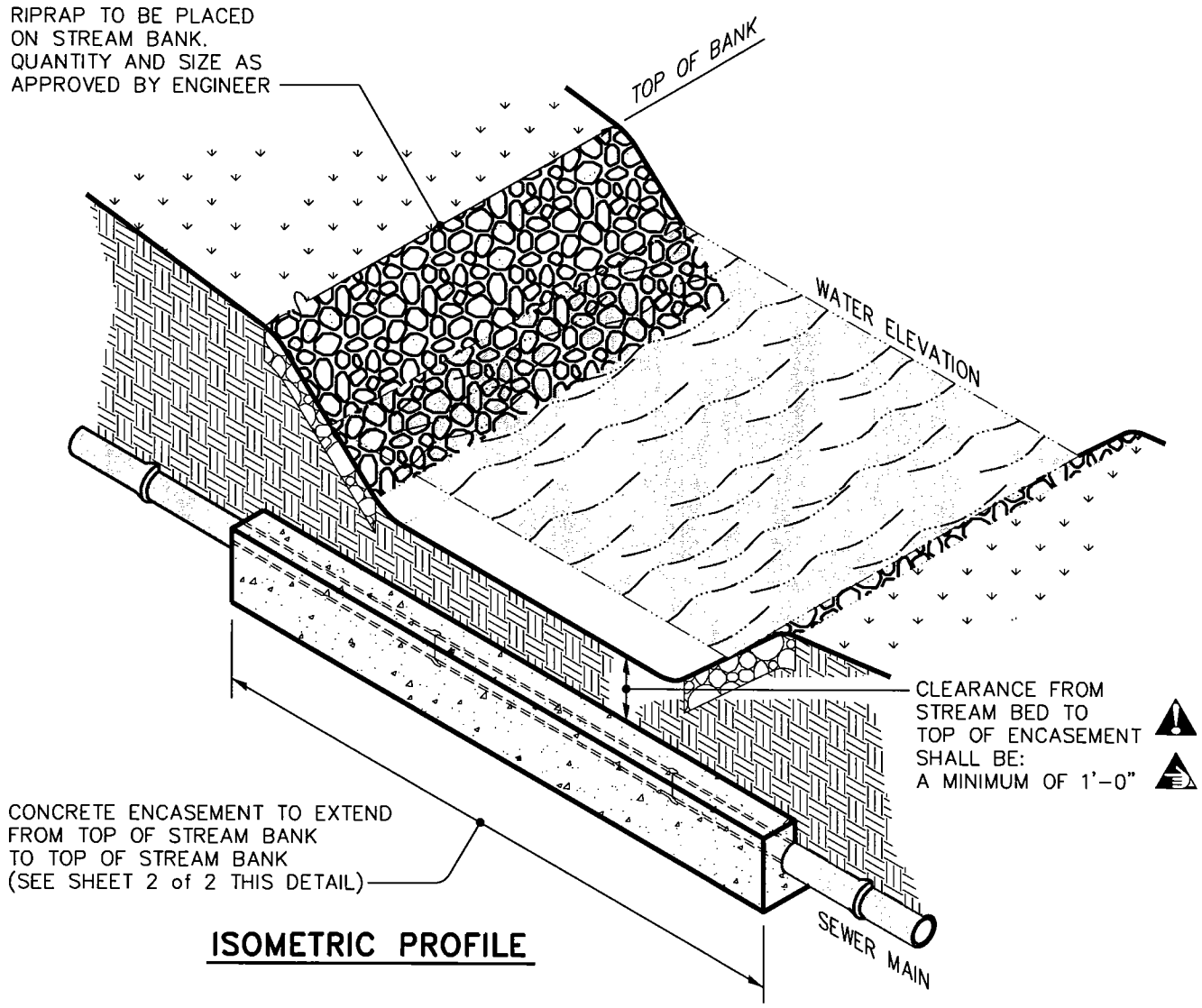
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE

DETAIL # 27.18

REVISION DATE: 04-10-03

SHEET #: 2 OF 2



ISOMETRIC PROFILE

NOTES:

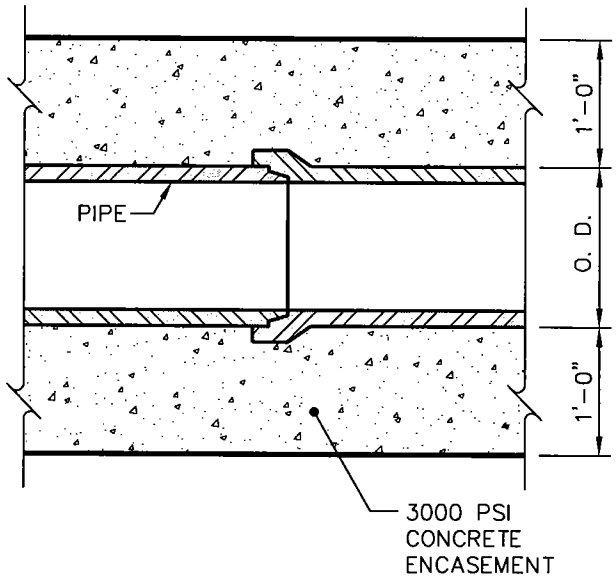
1. CONCRETE TO BE 3,000 PSI.
2. ENCASEMENT TO BE USED ONLY WHERE SPECIFIED ON PLANS.
3. PIPE SHALL BE DUCTILE IRON PIPE.
4. FILTER FABRIC TO BE PLACED UNDER RIP-RAP AND KEYED INTO EMBANKMENT.

THE CITY OF LYNCHBURG

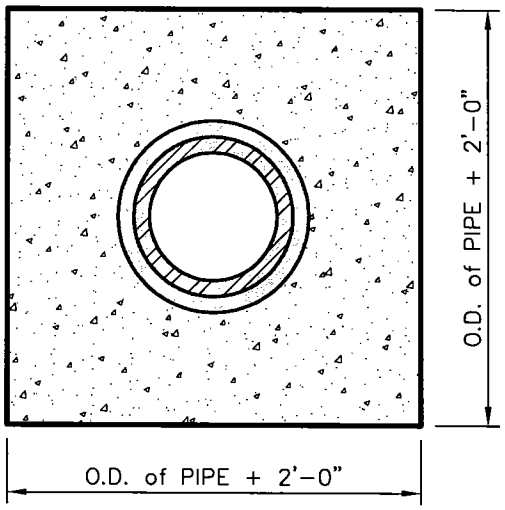
SEWER LINE CROSSING BENEATH STREAM BED

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.19
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



LONGITUDINAL SECTION



TRANSVERSE SECTION

NOTES:

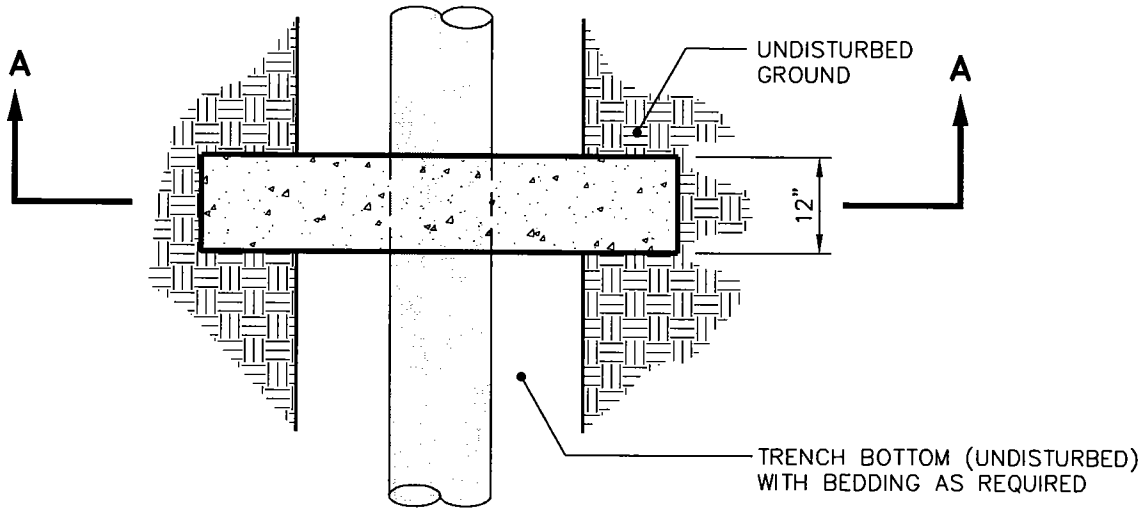
1. ENCASEMENT TO BE USED ONLY WHERE SPECIFIED ON PLANS.

THE CITY OF LYNCHBURG

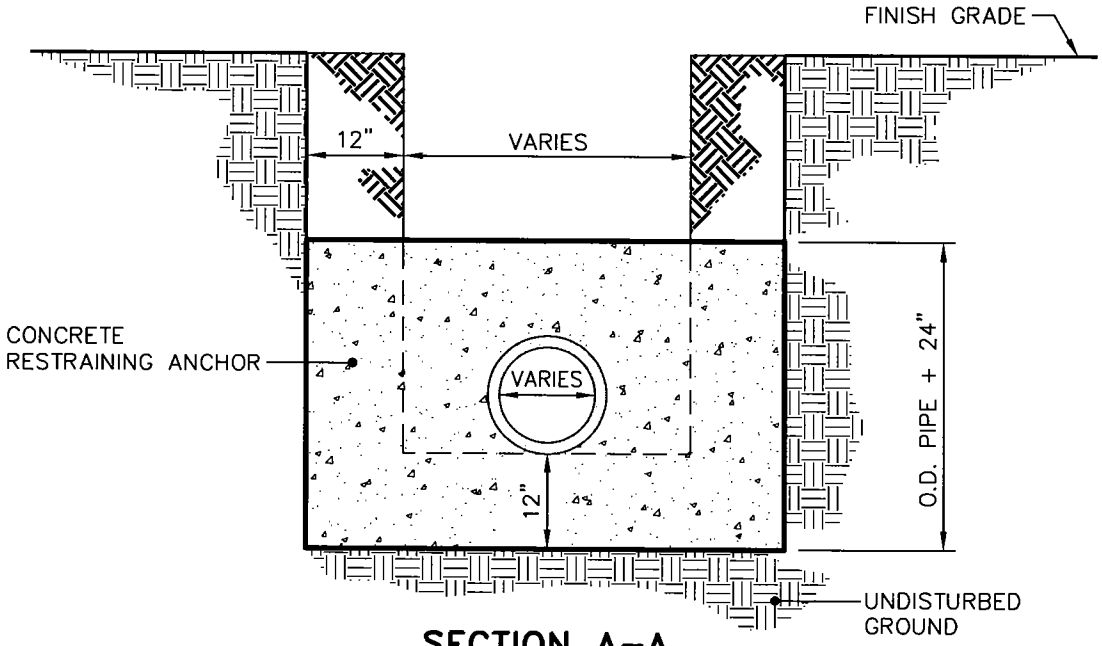
SEWER LINE CROSSING BENEATH STREAM BED

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.19
REVISION DATE:	SHEET #:
04-10-03	2 OF 2



PLAN



SECTION A-A

NOTES:

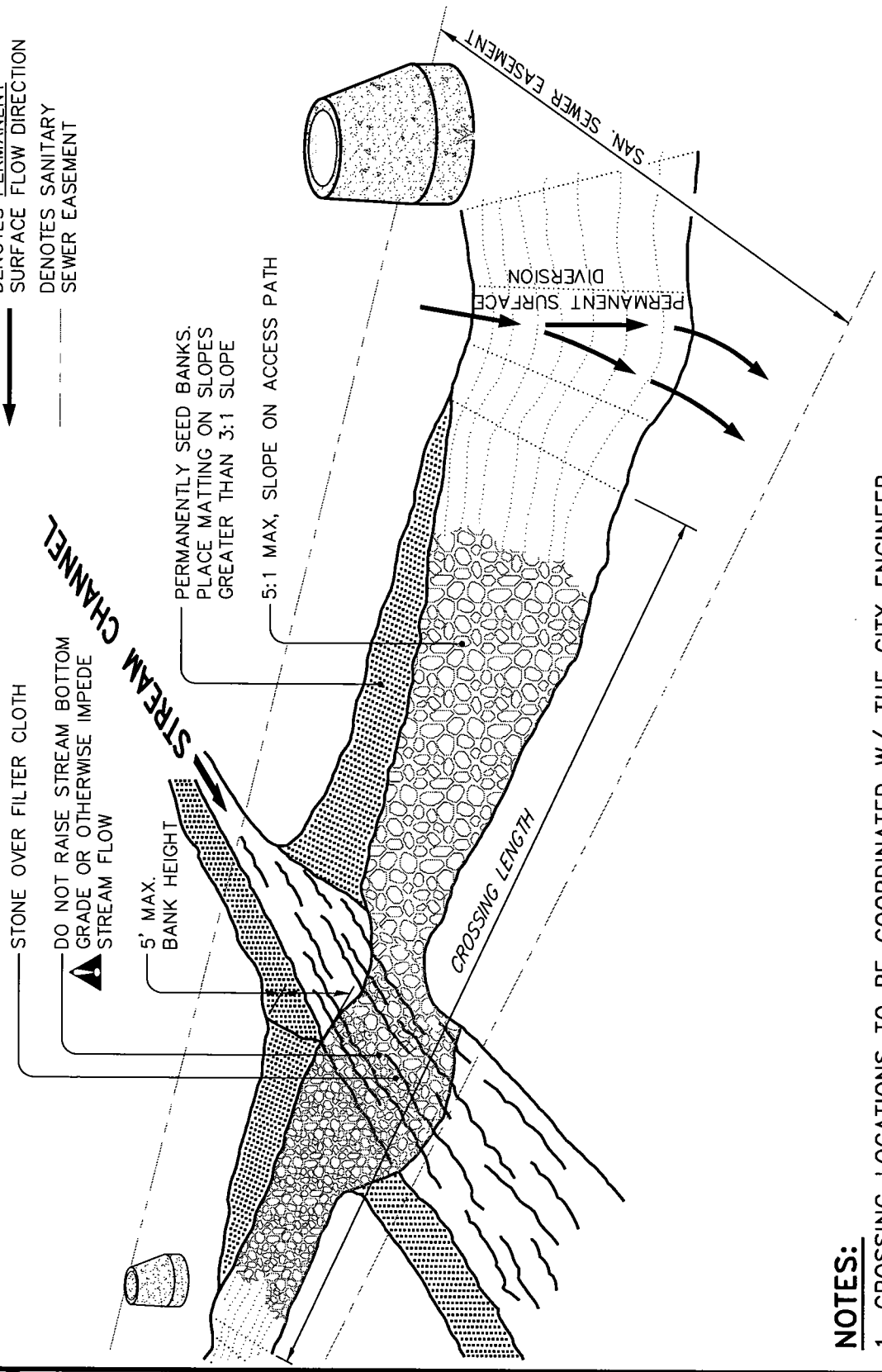
1. SPACING FOR CONCRETE RESTRAINING ANCHORS SHALL BE AS SHOWN ON THE PLANS.
2. THE PORTION OF THE ANCHOR IN UNDISTURBED GROUND SHALL BE POURED UNFORMED.
3. CONCRETE SHALL BE 3000 PSI.
4. CONCRETE ANCHOR TO BE POURED AROUND BELL OF PIPE WHERE APPLICABLE.
5. USE ON SLOPES EQUAL TO OR GREATER THAN 20%.
6. PIPE SHALL BE DUCTILE IRON PIPE.

THE CITY OF LYNCHBURG

CONCRETE RESTRAINING ANCHOR

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.21
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

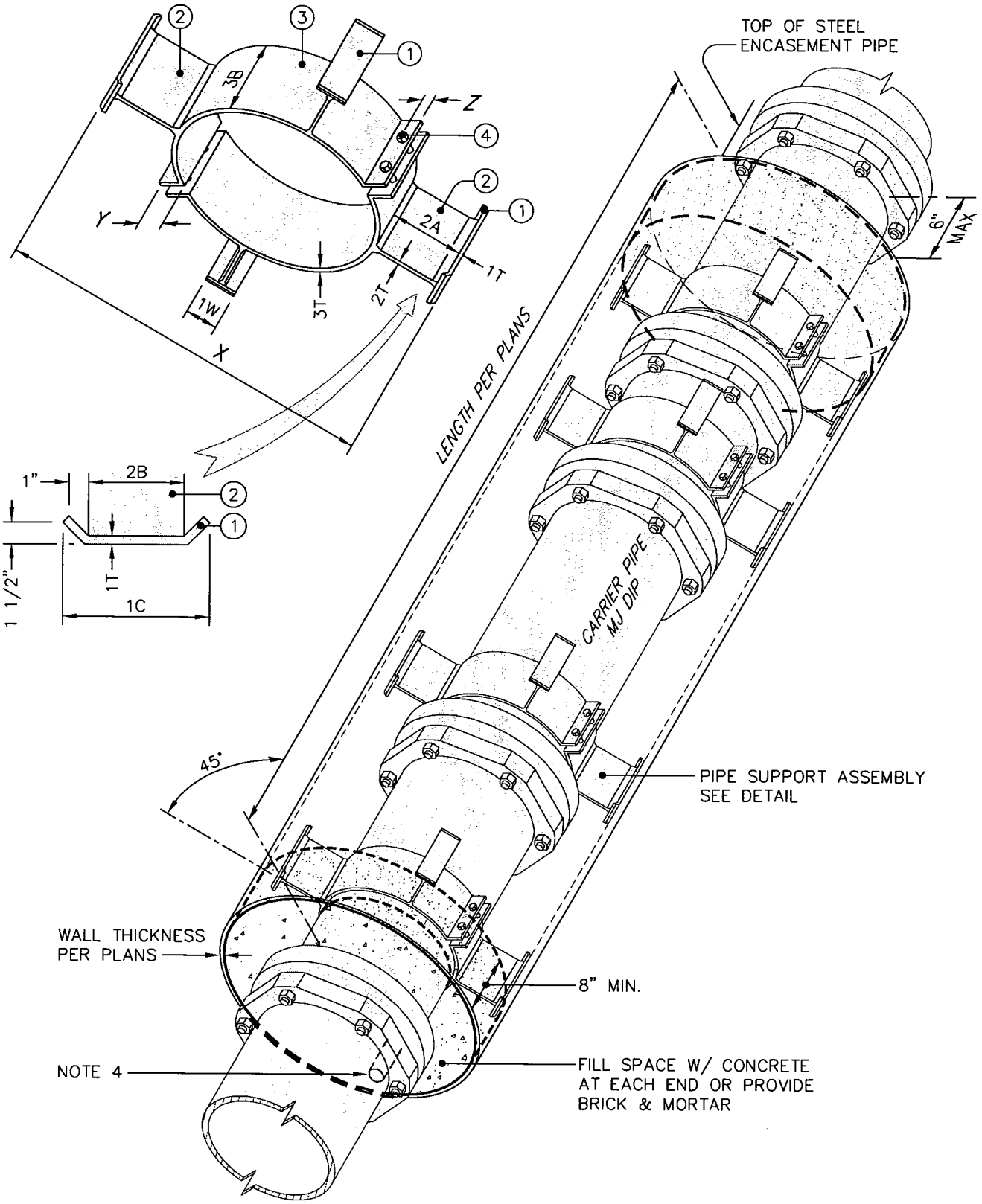
1. CROSSING LOCATIONS TO BE COORDINATED W/ THE CITY ENGINEER.
2. IN THE STREAM BED, FOR A DISTANCE OF 1/2 WIDTH ON EACH SIDE, PLACE GRADED RIP RAP TO A DEPTH SUFFICIENT TO PROVIDE A STABLE ROAD BASE AND COVER W/ 4" OF VDOT #1 OR #2 STONE. ON REMAINING CROSSING LENGTH, PLACE 6" OF VDOT #1 OR #2.

THE CITY OF LYNCHBURG

PERMANENT STREAM FORDING DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.22
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



THE CITY OF LYNCHBURG

STEEL ENCASEMENT DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	27.23
REVISION DATE:	SHEET #:
10-21-04	1 OF 2

THE CITY OF LYNCHBURG

STEEL ENCASEMENT DETAIL

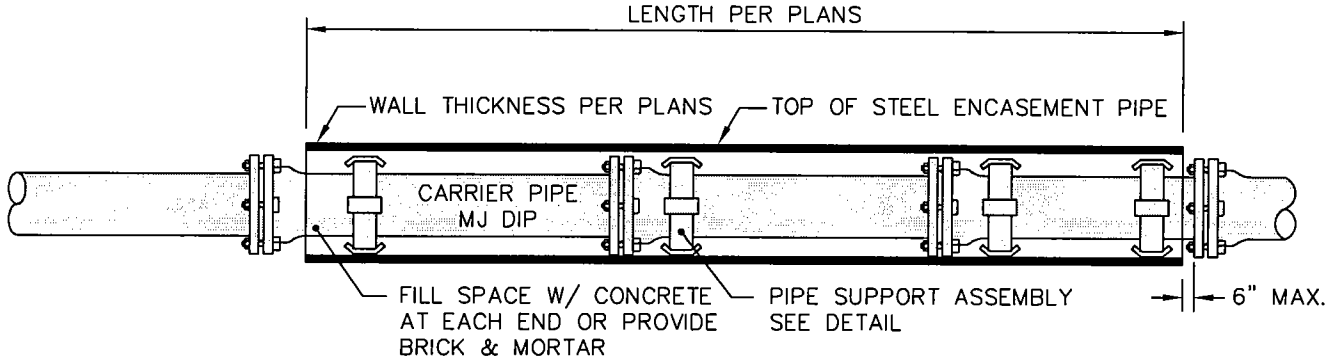
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE

DETAIL # 27.23

REVISION DATE: 04-10-03

SHEET #: 2 OF 2



ENCASEMENT PIPE DETAIL

CARRIER PIPE		CASING PIPE RAILROAD (*) HIGHWAY				PIPE SUPPORT ASSEMBLY MARK NUMBER									DIMENSIONS		
						①			②			③		4			
NOMINAL DIA.	O.D.	O.D.	WALL	O.D.	WALL	C	W	T	B	A	T	B	T		X	Y	Z
6"	6.90"	12"	.251"	12"	.188"	5"	2"	3/8"	3"	1"	3/8"	3"	3/8"	1/2" DIA. 1 REQ'D	10.40"	1 7/8"	3/4"
8"	9.05"	16"	.282"	16"	.188"	6"	2"	3/8"	4"	1 3/4"	3/8"	3"	3/8"	1/2" DIA. 1 REQ'D	14.05"	1 7/8"	3/4"
10"	11.10"	24"	.407"	24"	.188"	6"	2"	3/8"	4"	4 3/4"	3/8"	4"	3/8"	1/2" DIA. 1 REQ'D	22.10"	3"	1 3/8"
12"	13.20"	24"	.407"	24"	.188"	6"	2"	3/8"	4"	3 3/4"	3/8"	4"	3/8"	1/2" DIA. 1 REQ'D	22.20"	3"	1 3/8"
14"	15.30"	24"	.407"	24"	.250"	6"	2"	3/8"	4"	2 3/4"	3/8"	4"	3/8"	1/2" DIA. 1 REQ'D	22.30"	3"	1 3/8"
16"	17.40"	30"	.469"	30"	.250"	8"	3"	3/8"	6"	4 1/4"	3/8"	6"	3/8"	3/4" DIA. 1 REQ'D	27.40"	3"	1 3/8"
18"	19.50"	30"	.469"	30"	.250"	8"	3"	3/8"	6"	3 1/4"	3/8"	6"	3/8"	3/4" DIA. 1 REQ'D	27.50"	3"	1 3/8"
24"	25.80"	42"	.563"	42"	.312"	12"	4"	1/2"	10"	5 3/4"	1/2"	10"	1/2"	1/2" DIA. 2 REQ'D	39.30"	3"	1 3/8"
30"	32.00"	42"	.563"	42"	.312"	12"	4"	1/2"	10"	2 1/2"	1/2"	10"	1/2"	1/2" DIA. 2 REQ'D	39.00"	3"	1 3/8"

* DIMENSIONS ARE WITHOUT COATINGS

NOTES:

1. GREASE ENCASEMENT PIPE AS REQUIRED FOR EASE OF INSTALLATION.
2. INSTALLATION BY DRY BORE & JACKING.
3. STEEL PIPE TO BE 35,000 PSI MIN. YIELD STRENGTH.
4. PROVIDE A 2" DRAIN PIPE FROM CASING PIPE AT DOWNSTREAM INVERT OF CASING PIPE. DRAIN TO DAYLIGHT OR FRENCH DRAIN.

10/09/2003 - 1:30:29 PM

THE CITY OF LYNCHBURG

TYPICAL CURB and GUTTER STREET SECTION

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

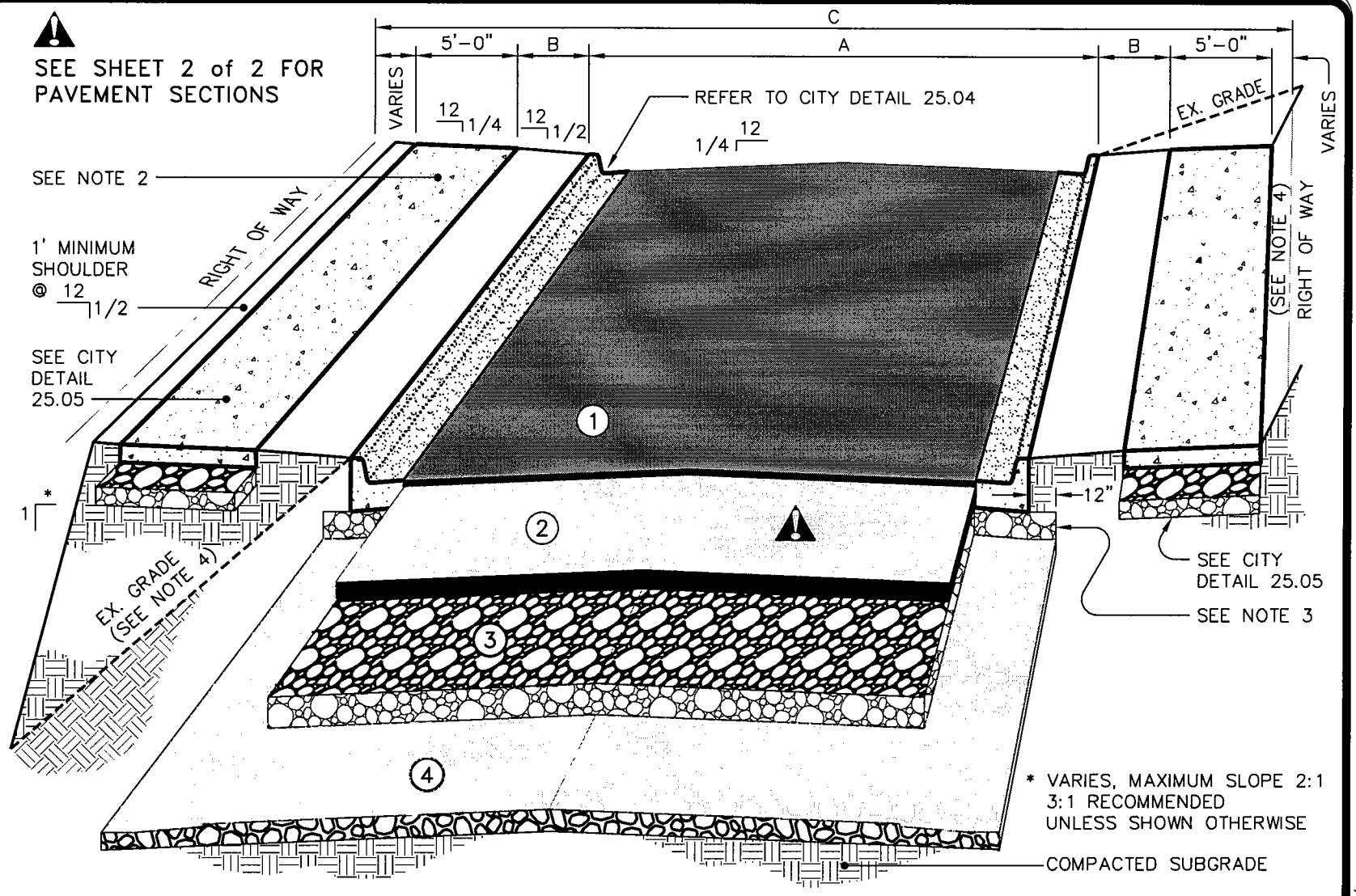
THE CITY OF LYNCHBURG

SCALE: NOT TO SCALE

REVISION DATE: 04-10-03

DETAIL # 25.01

SHEET #: 1 OF 2



NOTES:

1. PAVEMENT WIDTH AND STREET RIGHT OF WAY SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
2. FACEDOWN SIDEWALK (CITY STANDARD DETAIL 25.06) MAY BE SUBSTITUTED FOR STANDARD CURB AND GUTTER AND SIDEWALK IF APPROVED BY CITY ENGINEER.
3. PLACE 6" OF 21 or 21A COMPACTED AGGREGATE UNDER PAVEMENT AND STANDARD CURB AND GUTTER, AND EXTEND 12" BEYOND CURB AND GUTTER.
4. REFER TO PLAN CROSS-SECTIONS FOR SLOPE TIE-INS.

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THE CITY OF LYNCHBURG

TYPICAL CURB and GUTTER STREET SECTION

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

MATRIX #1 – GEOMETRIC PROPERTIES							
CLASSIFICATION	BACK TO BACK (Ft.) MINIMUM	BACK TO BACK (Ft.) MINIMUM	PAVEMENT SECTION				(Ft.) (MINIMUM)
			RIDING SURFACE	BASE	AGGREGATE BASE (SEE NOTE 1)	SUB BASE	
	A	B	①	②	③	④	C
RESIDENTIAL	25'–0" (SEE NOTE 2)	5'–0" (SEE NOTE 3)	1 1/2" SM–9.5A	N/A	6" No. 21 or No. 21A	N/A	50'
COLLECTOR	31'–0"	3'–6"	2" 12.5D	4" BM–25.0	6" No. 21 or No. 21A	N/A	60'
INDUSTRIAL	31'–0"	3'–6"	2" IM–19.0A	5" BM–25.0	6" CEMENT TREATED STABILIZED AGGREGATE BASE	4" No. 21 or No. 21A	50'

NOTES:

1. FOR ALL STREET CLASSIFICATIONS:
   AGGREGATE BASE SHALL BE SEALED WITH LIQUID BITUMINOUS MATERIAL CRS–2 AT THE RATE OF 0.3 GALLONS PER SQUARE YARD AND COVERED WITH No. 78 STONE AT THE RATE OF 15 POUNDS PER SQUARE YARD. THIS IS NOT REQUIRED IF BASE ASPHALT OF 4" OR GREATER IS INSTALLED.
2. FOR AN ADT OF 401 PROJECTED VEHICLES AND ABOVE THEN "A" IS 31'–0".
3. WHEN THE ADT DICTATES THAT "A" BE 31'–0", THEN "B" IS 3'–6".
4. THE DESIGN DEPTHS SHOWN ABOVE ARE MINIMUM REQUIREMENTS. ACTUAL DEPTHS SHALL BE DETERMINED THROUGH CBR TESTING AND ANALYSIS.

SCALE: NOT TO SCALE

REVISION DATE: 04–10–03

DETAIL # 25.01

SHEET #: 2 OF 2

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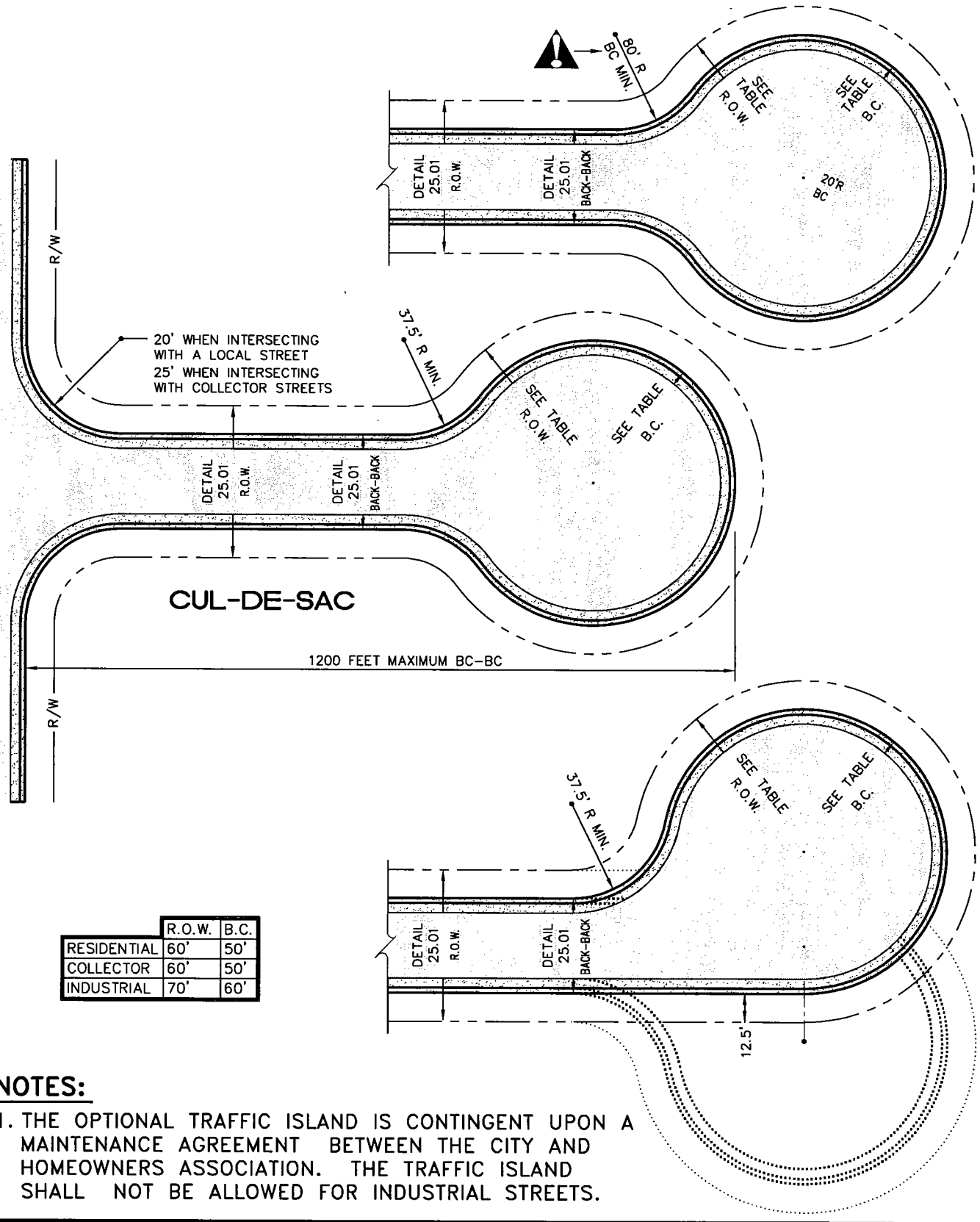


	R.O.W.	B.C.
RESIDENTIAL	60'	50'
COLLECTOR	60'	50'
INDUSTRIAL	70'	60'

NOTES:

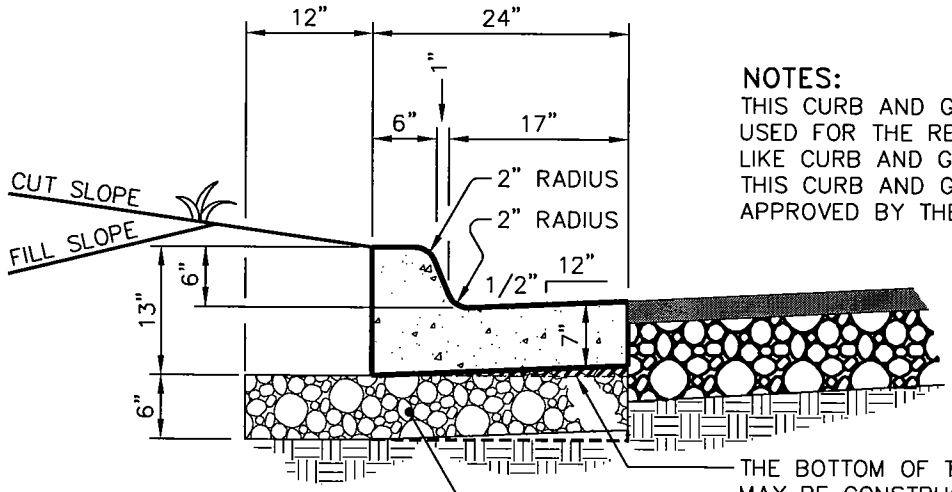
1. THE OPTIONAL TRAFFIC ISLAND IS CONTINGENT UPON A MAINTENANCE AGREEMENT BETWEEN THE CITY AND HOMEOWNERS ASSOCIATION. THE TRAFFIC ISLAND SHALL NOT BE ALLOWED FOR INDUSTRIAL STREETS.

THE CITY OF LYNCHBURG

CUL-DE-SAC DIMENSIONS

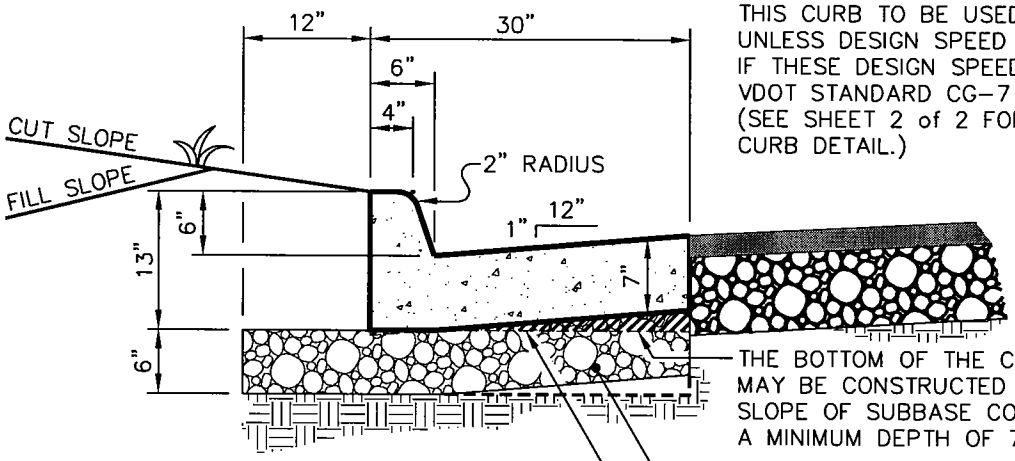
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.02
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:
THIS CURB AND GUTTER DETAIL SHALL BE USED FOR THE REPLACEMENT OF EXISTING LIKE CURB AND GUTTER. EXTENSIONS OF THIS CURB AND GUTTER SHALL BE APPROVED BY THE CITY ENGINEER.

STANDARD CITY COMBINED 6" CURB & GUTTER



NOTES:
THIS CURB TO BE USED ON ALL ROADWAYS UNLESS DESIGN SPEED EXCEEDS 45 M.P.H. IF THESE DESIGN SPEEDS ARE EXCEEDED, VDOT STANDARD CG-7 IS REQUIRED. (SEE SHEET 2 of 2 FOR CG-7 MOUNTABLE CURB DETAIL.)

STANDARD VDOT COMBINATION 6" CURB & GUTTER (CG-6)*

* PER 2001 VDOT ROAD AND BRIDGE STANDARDS OR LATEST REVISION

NOTES:

1. SCORE CURB / VALLEY GUTTER AT 10' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90' O.C.
3. CONCRETE TO BE 3000 P.S.I. @ 28 DAYS, AIR ENTRAINED.
4. THESE NOTES APPLY TO SHEETS 1 THRU 3 OF THIS DETAIL.

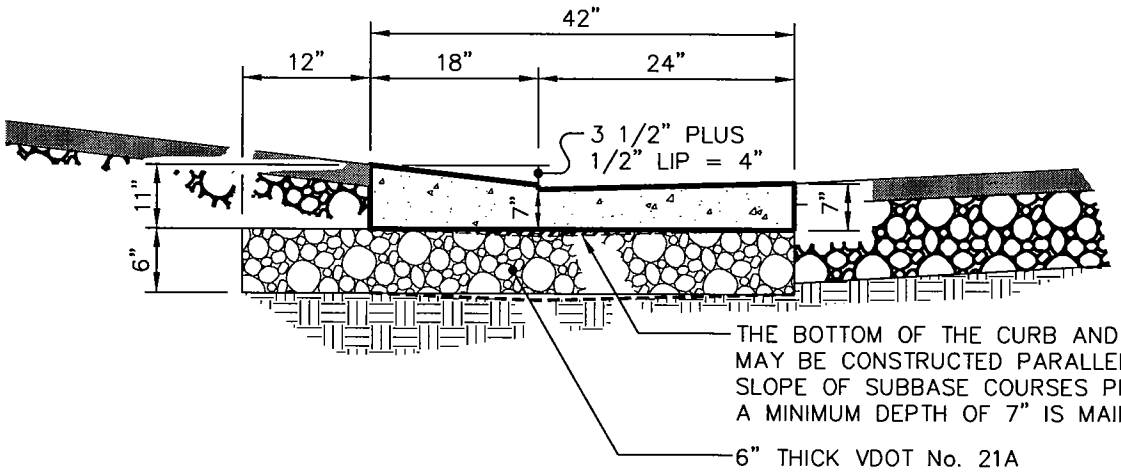
THE CITY OF LYNCHBURG

STD. CURB & GUTTER & VALLEY GUTTER DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.04
REVISION DATE:	SHEET #:
04-10-03	1 OF 3

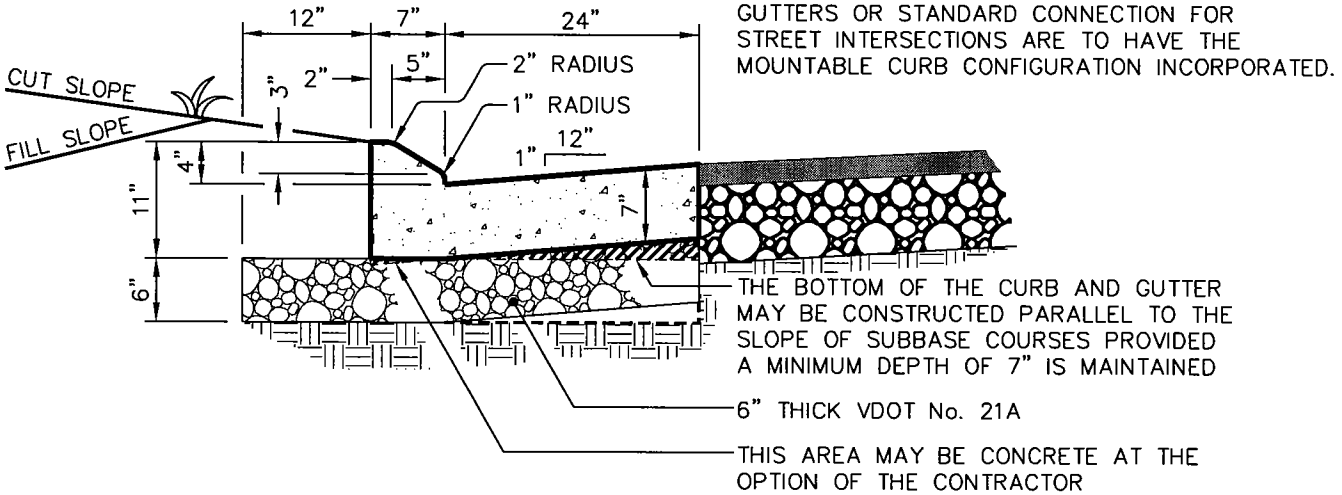
NOTES:
THIS CURB MAY BE USED ONLY IF APPROVED BY CITY ENGINEER.



STANDARD CITY COMBINATION 4" VALLEY CURB & GUTTER

NOTES:
THIS CURB MAY BE USED WITH APPROVAL OF CITY ENGINEER BUT IS REQUIRED WHEN DESIGN SPEED IS GREATER THAN 45 M.P.H.

WHEN COMBINATION MOUNTABLE CURB AND GUTTER IS USED, THE STANDARD ENTRANCE GUTTERS OR STANDARD CONNECTION FOR STREET INTERSECTIONS ARE TO HAVE THE MOUNTABLE CURB CONFIGURATION INCORPORATED.



STANDARD VDOT COMBINATION 4" MOUNTABLE CURB & GUTTER (CG-7)*

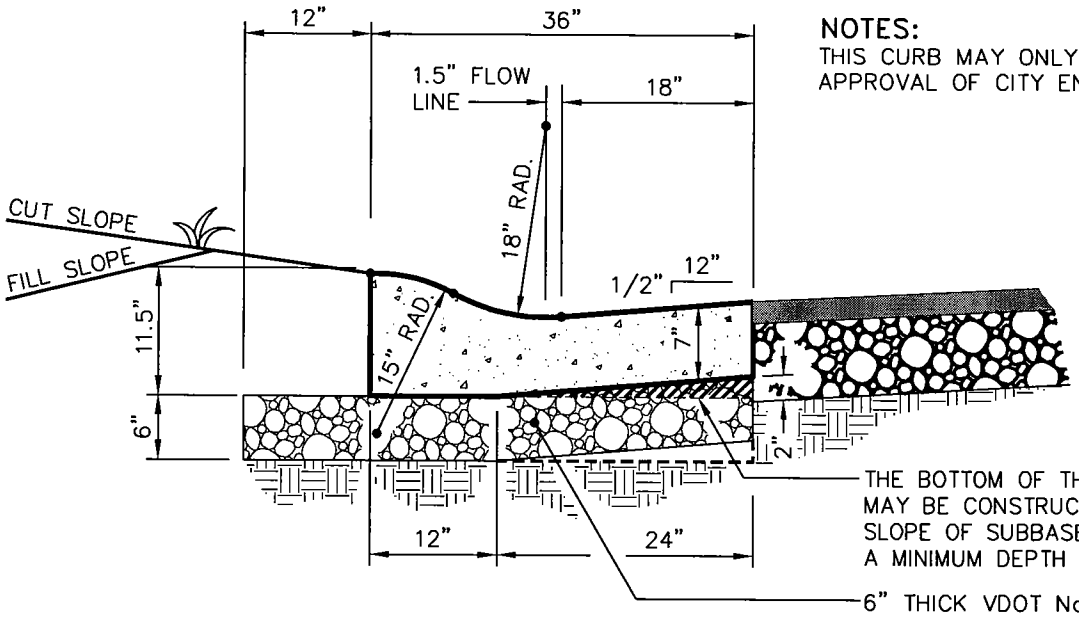
* PER 2001 VDOT ROAD AND BRIDGE STANDARDS OR LATEST REVISION

THE CITY OF LYNCHBURG

STD. CURB & GUTTER & VALLEY GUTTER DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

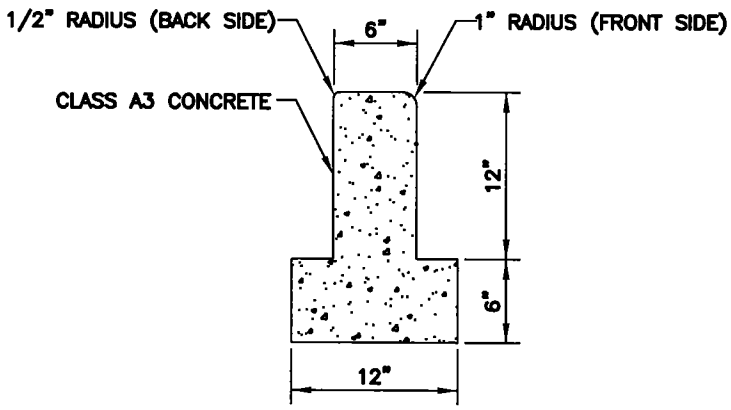
SCALE:	DETAIL #
NOT TO SCALE	25.04
REVISION DATE:	SHEET #:
04-10-03	2 OF 3



NOTES:
THIS CURB MAY ONLY BE USED WITH APPROVAL OF CITY ENGINEER.

STANDARD VDOT ROLL TOP CURB

THE CITY OF LYNCHBURG			
STD. CURB & GUTTER & VALLEY GUTTER DETAIL		SCALE: NOT TO SCALE	DETAIL # 25.04
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY		REVISION DATE: 04-10-03	SHEET #: 3 OF 3

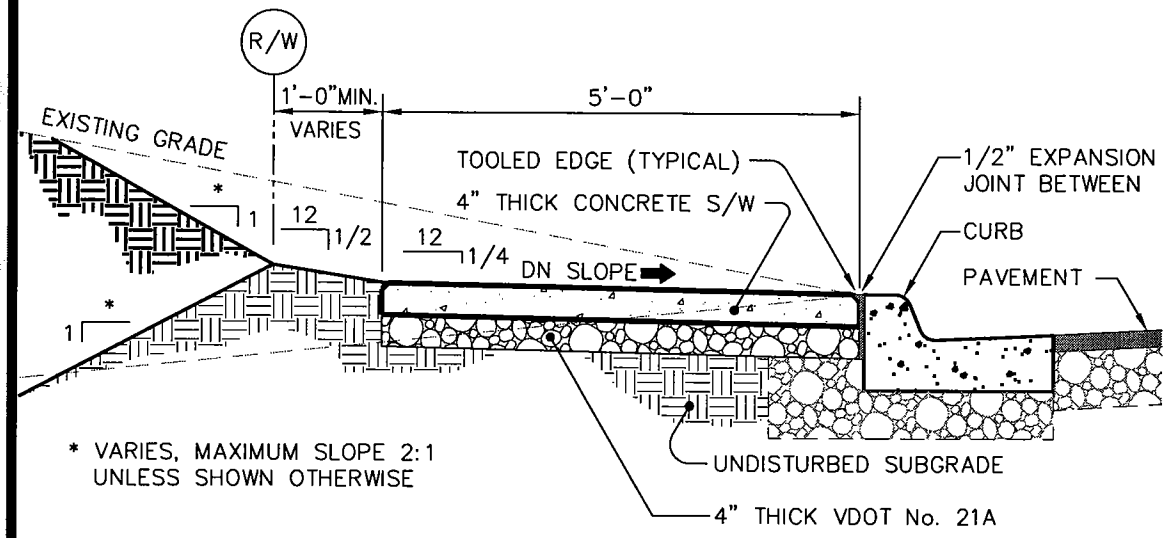


THE CITY OF LYNCHBURG

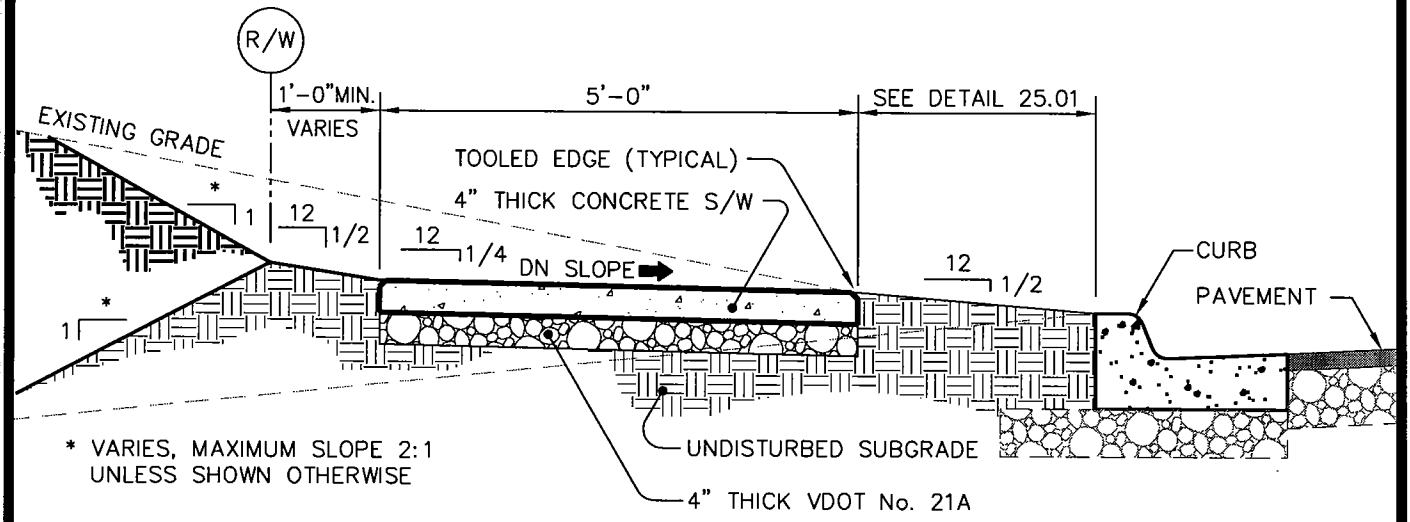
STD. CONCRETE CURB 6" x 18"

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.04A
REVISION DATE:	SHEET #:
11-30-04	1 OF 1



TYPICAL SIDEWALK without PARKWAY



TYPICAL SIDEWALK with PARKWAY

NOTES:

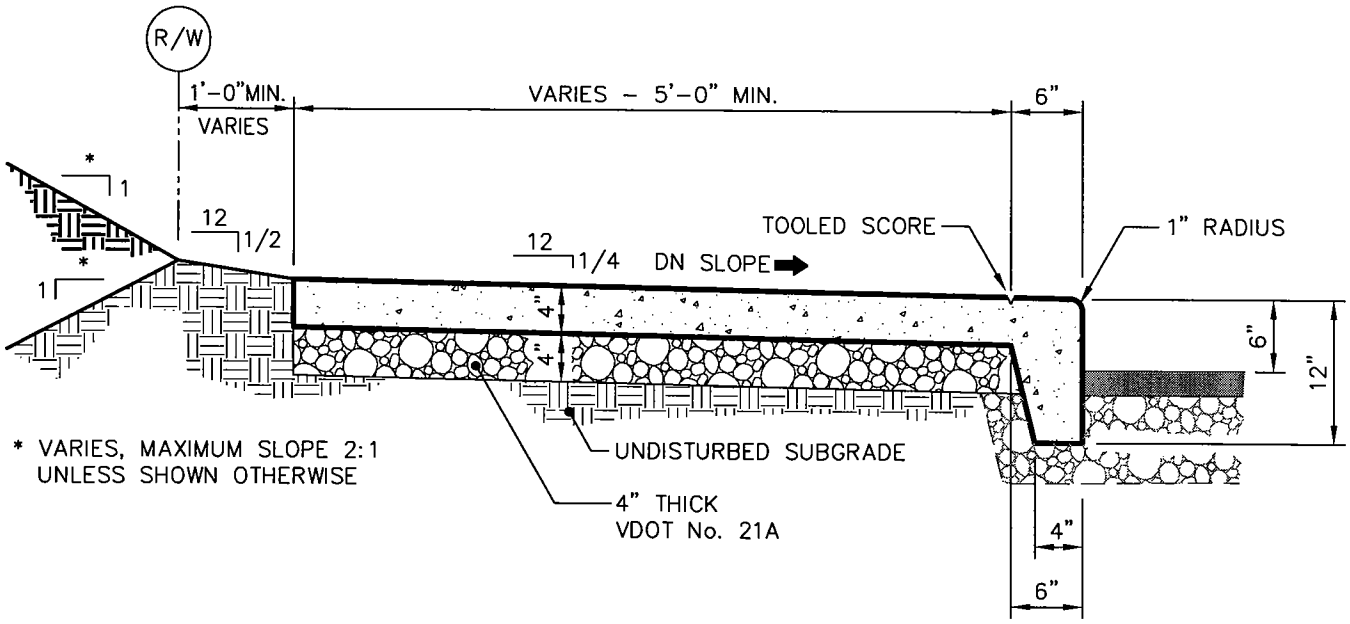
1. PROVIDE 3/4" DEEP TOOLED SCORE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.

THE CITY OF LYNCHBURG

STANDARD SIDEWALK DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.05
REVISION DATE:	SHEET #:
07-17-03	1 OF 1



NOTES:

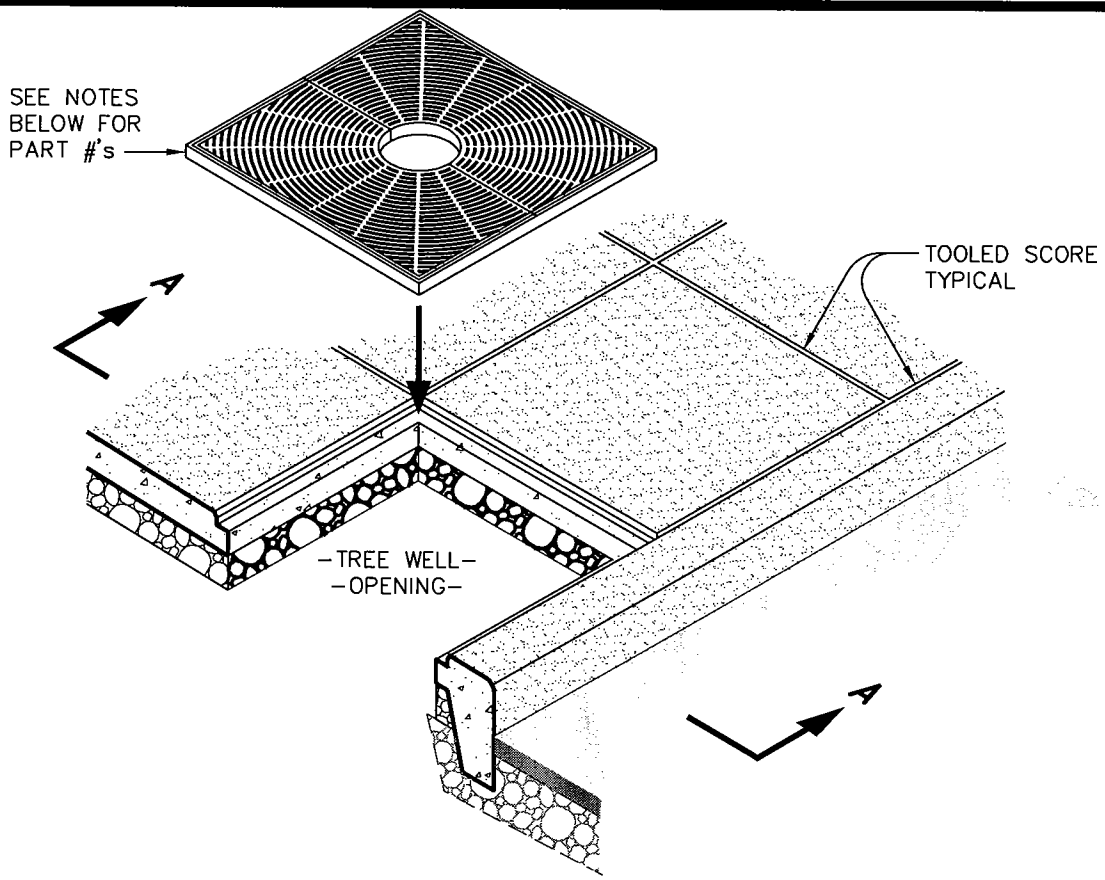
1. PROVIDE 3/4" DEEP TOOLED SCORES AT 5'-0" O.C. PERPENDICULAR TO FACE OF CURB AND ALONG CURB LINE.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.

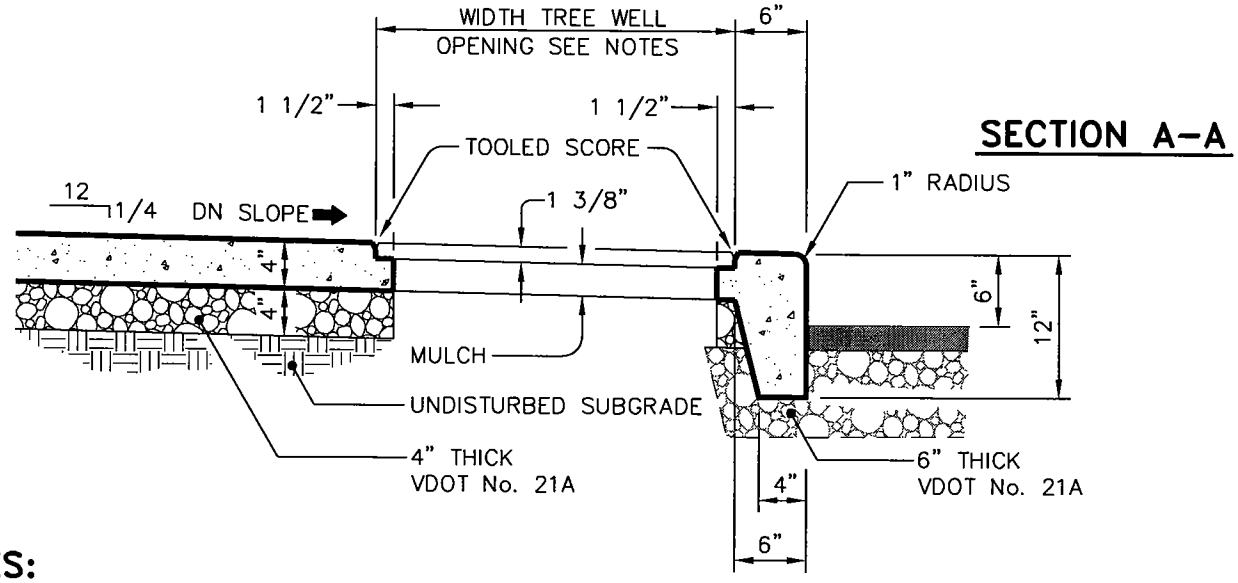
THE CITY OF LYNCHBURG

FACEDOWN SIDEWALK

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.06
REVISION DATE:	SHEET #:
07-17-03	1 OF 1





SECTION A–A

NOTES:

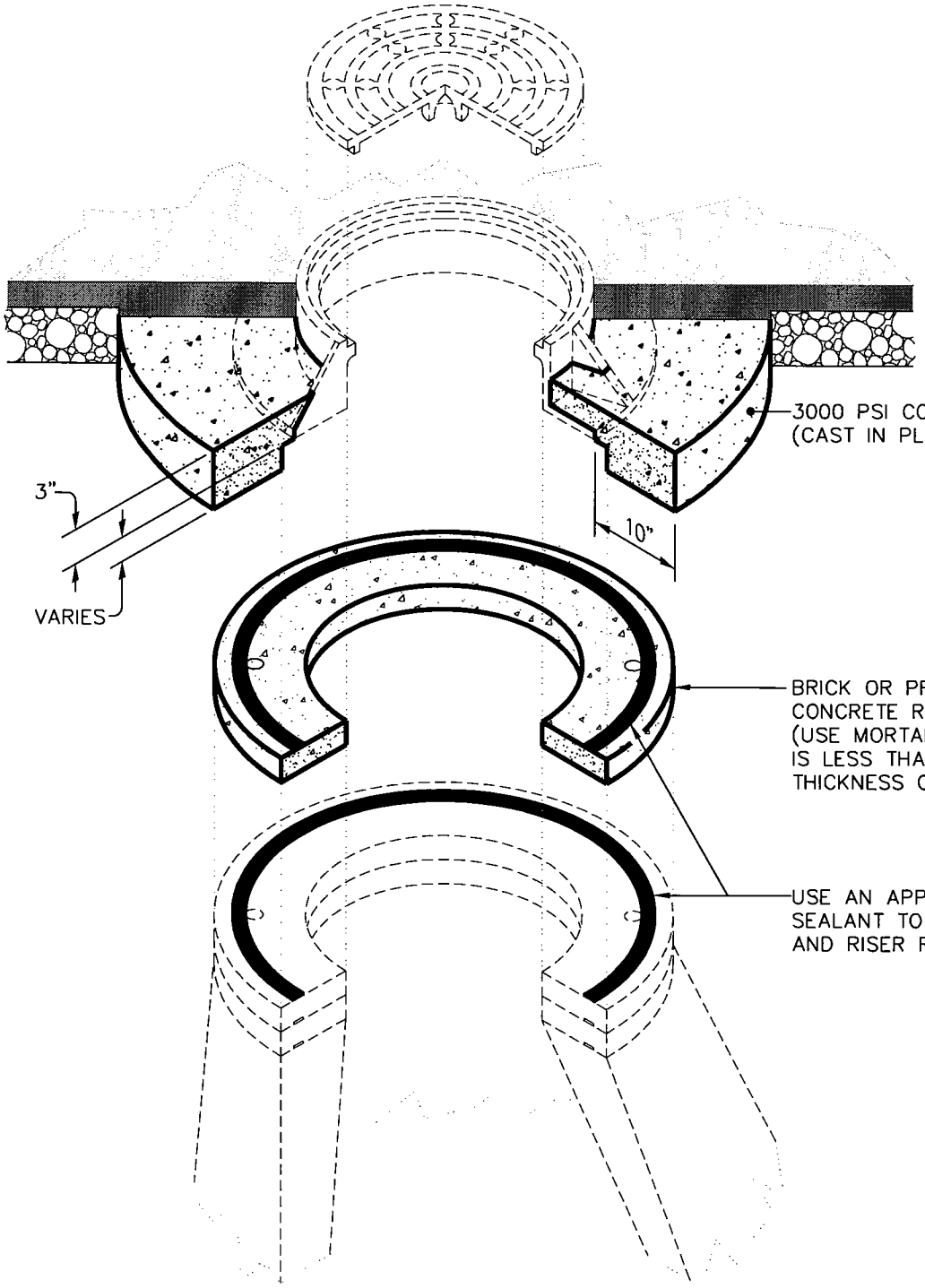
1. FOR 4' SIDEWALKS USE NEENAH R–8710 180° SQUARE WITH 3/8" SLOT OPENINGS. FOR 5' SIDEWALKS USE NEENAH R–8712 180° SQUARE WITH 3/8" SLOT OPENINGS.
2. FOR NEW CONSTRUCTION: SIDEWALK AND CURB TO BE POURED MONOLITHICALLY. FOR EXISTING SIDEWALK: SAW CUT SIDEWALK FOR TREE WELL OPENING.
3. CONCRETE TO BE CLASS 3,000 P.S.I.

THE CITY OF LYNCHBURG

TREE WELL OPENING IN SIDEWALK

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.07
REVISION DATE:	SHEET #:
07-17-03	1 OF 1



NOTES:

1. SIMILAR DETAIL TO BE USED FOR LAMPSTACKS.

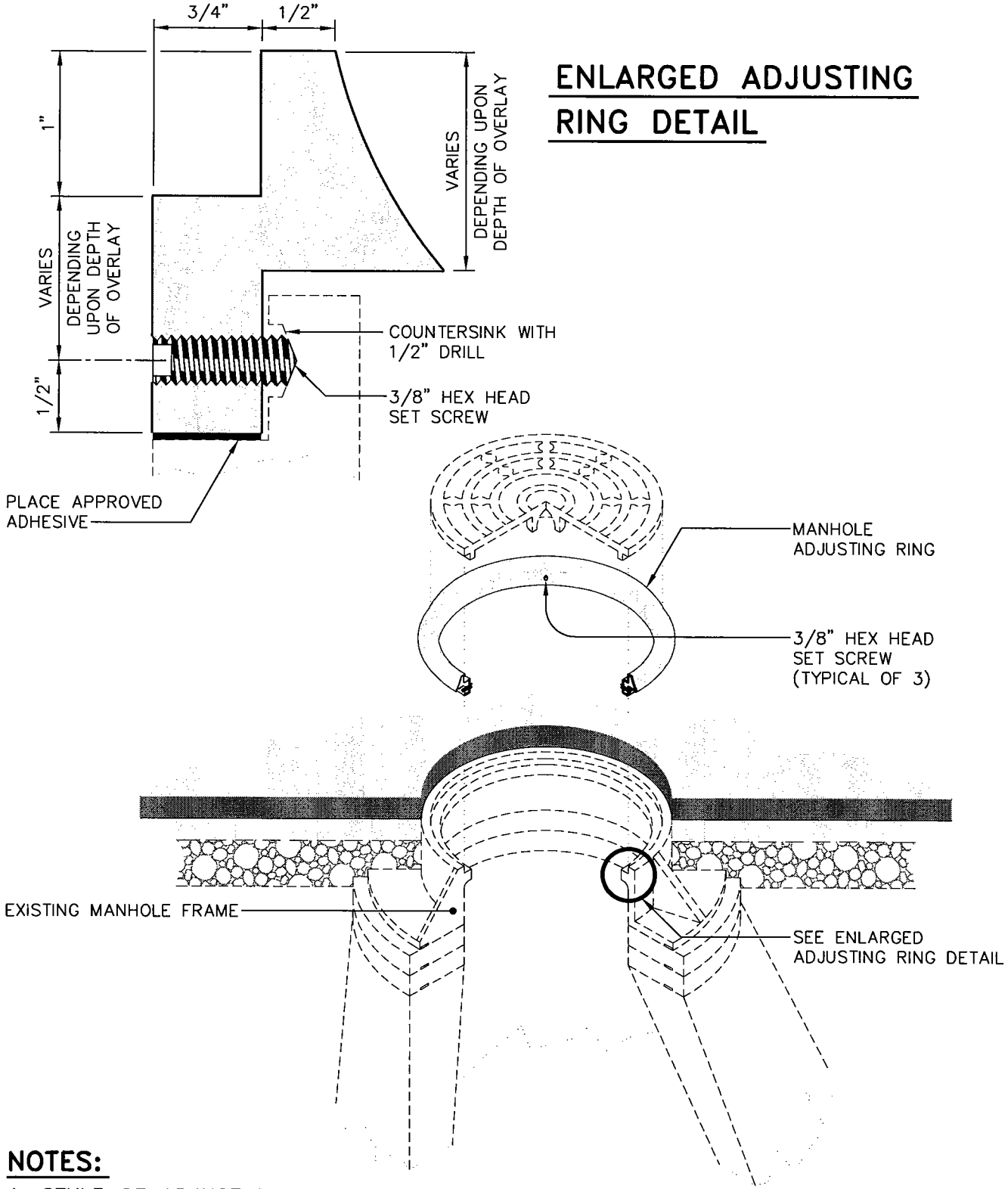
THE CITY OF LYNCHBURG

RAISING MANHOLES and LAMPSTACKS

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.08
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

ENLARGED ADJUSTING RING DETAIL



NOTES:

1. STYLE OF ADJUSTING RING MAY VARY.
2. THE CONTRACTOR SHALL FIELD VERIFY DIAMETER OF ADJUSTING RING.

THE CITY OF LYNCHBURG

MANHOLE ADJUSTING RING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.09
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

NOTES:

1. CROSS AND SIDE RAMPS SHALL NOT EXCEED A SLOPE OF 12:1.

2. CROSS RAMP SHALL BE STAMPED WITH A MINIMUM OF 2'X3' WARNING PAD OF TRUNCATED DOME PATTERN MEETING THE CURRENT AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) TO DEFINE THE BOUNDARY BETWEEN THE SIDEWALK AND THE STREET AS SHOWN IN DETAIL. THE CROSS AND SIDE RAMP SURFACES SHALL BE TREATED WITH LITHOCROME A28-TILE RED COLOR HARDENER AND RELEASE AGENT TO PRODUCE A 70% CONTRAST WITH SURROUNDING CONCRETE SURFACES. CONTRACTOR TO SUBMIT PIGMENT MANUFACTURER'S COLOR CHART, CHIP SAMPLE, AND IMPRINT TEMPLATE FOR APPROVAL. THE SURFACE FINISH OF SIDE RAMPS SHALL MATCH ADJACENT SIDEWALK.

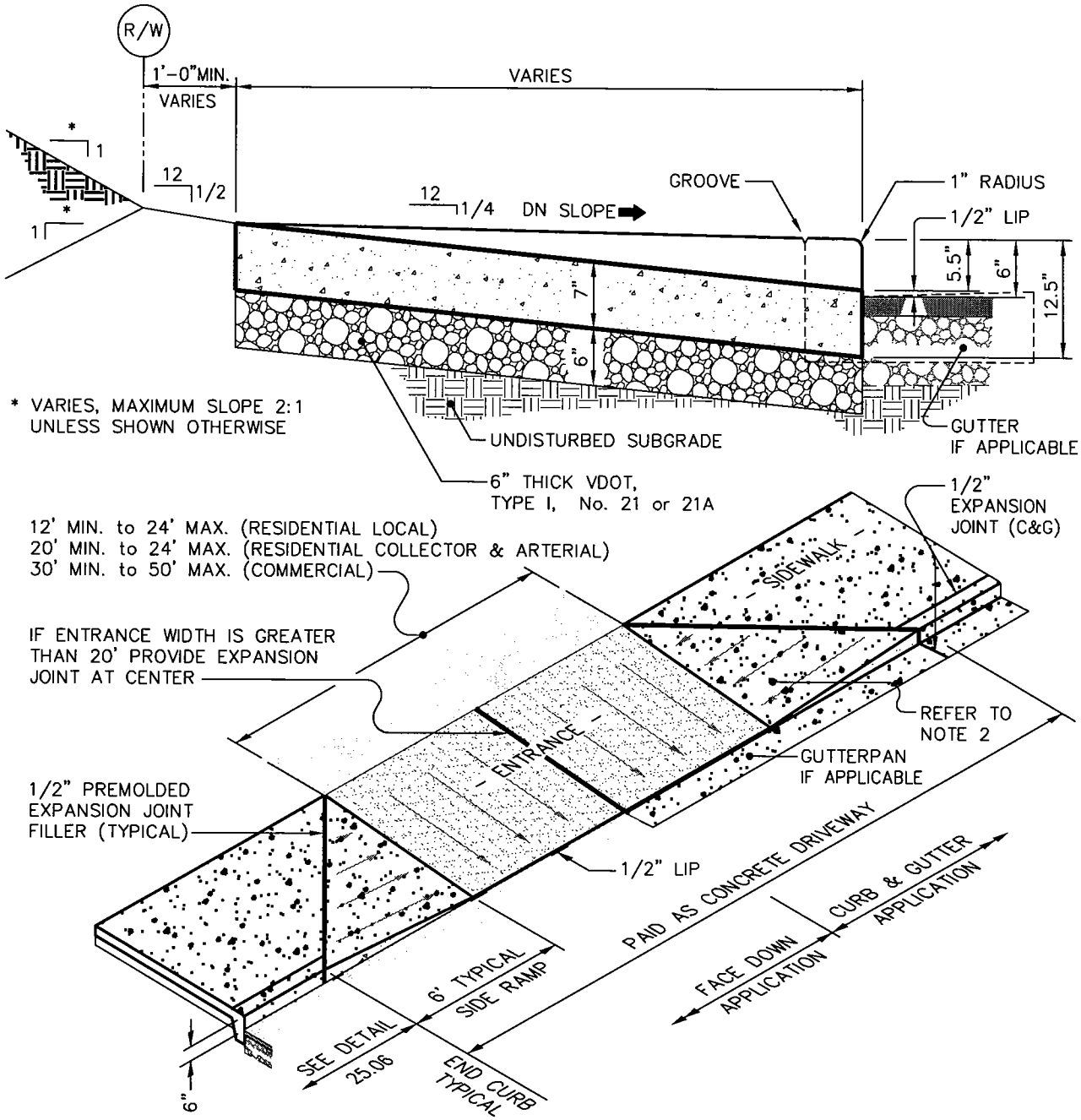
3. CURB RAMPS ARE TO BE LOCATED WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT-OF-WAY OF A ROADWAY CROSSES AS SHOWN ON PLANS OR AS DIRECTED BY CITY ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC.

THE CITY OF LYNCHBURG

DRIVEWAY OPENING ACROSS SIDEWALK

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.10
REVISION DATE:	SHEET #:
07-21-03	2 OF 2

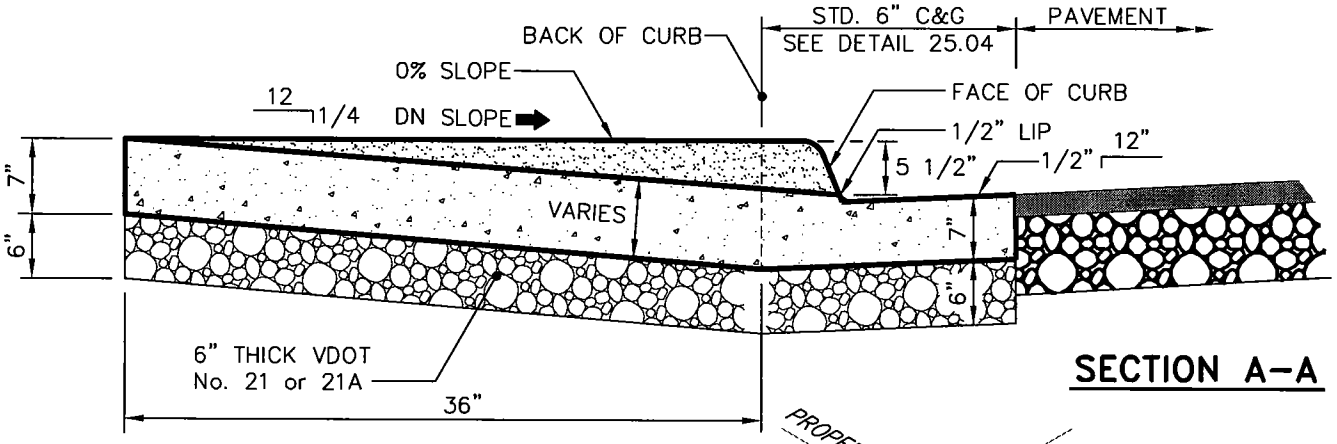


THE CITY OF LYNCHBURG

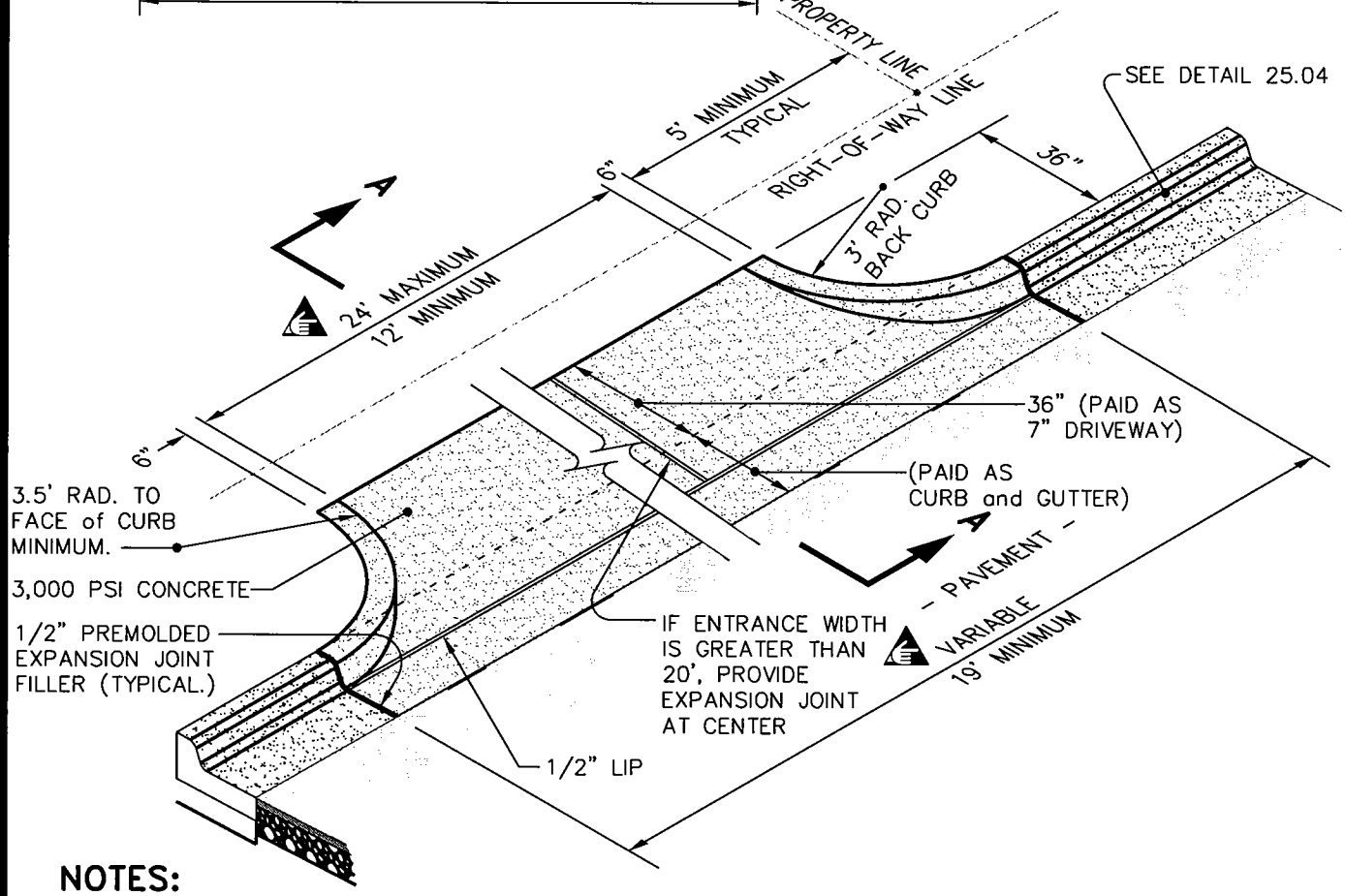
DRIVEWAY OPENING ACROSS SIDEWALK

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.10
REVISION DATE:	SHEET #:
07-21-03	1 OF 2



SECTION A-A



NOTES:

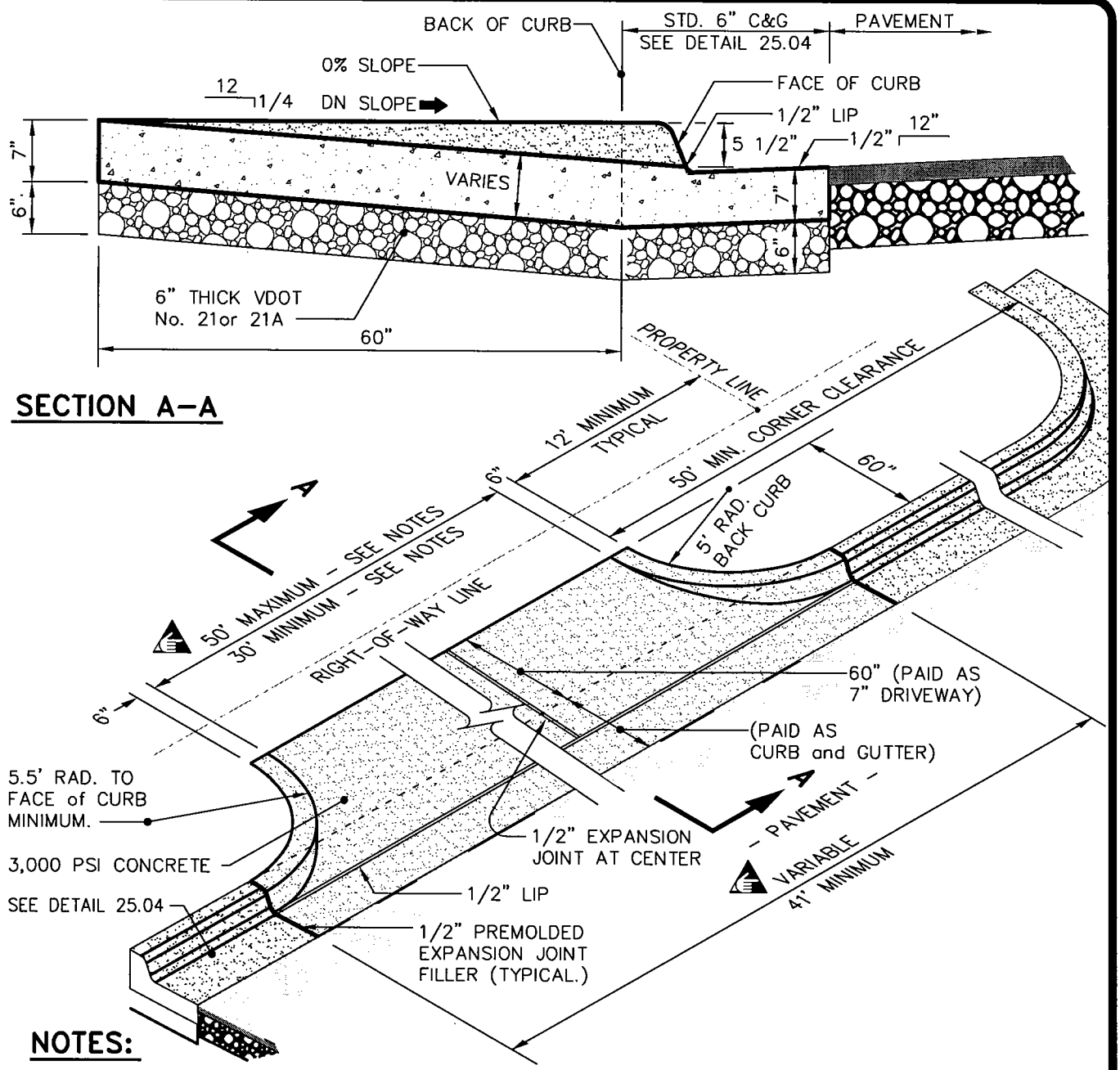
1. 20 FEET DRIVEWAY ENTRANCES SHALL BE USED ON COLLECTOR AND ARTERIAL STREETS.
2. RESIDENTIAL DRIVEWAYS SHALL NOT BE CONSTRUCTED IN THE RADIUS OF A CORNER LOT.
3. VDOT STANDARDS MAY BE SUBSTITUTED IF APPROVED BY CITY ENGINEER.
4. GRAVEL DRIVEWAYS ON COLLECTOR AND ARTERIAL STREETS SHALL BE PAVED A MINIMUM OF 10 FEET FROM EDGE OF CURB OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS GREATER.
5. ENTIRE ENTRANCE INCLUDING GUTTER AND APRON SHALL BE POURED MONOLITHICALLY.
6. WIDTH OF CURB & GUTTER SHALL MATCH WIDTH OF EXISTING CURB & GUTTER.

THE CITY OF LYNCHBURG

RESIDENTIAL DRIVEWAY ENTRANCE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.11
REVISION DATE:	SHEET #:
07-17-03	1 OF 1



SECTION A–A

NOTES:

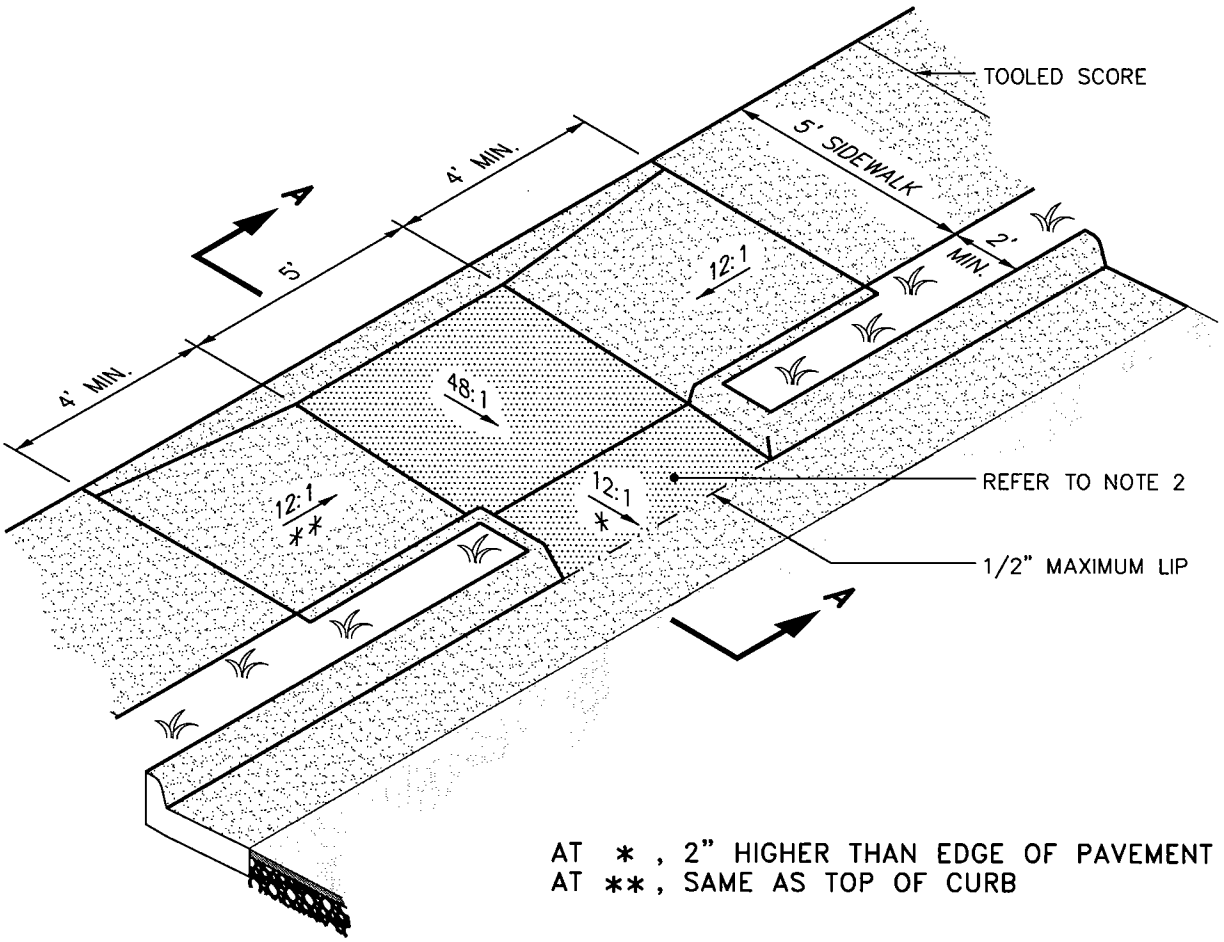
1. USE OF GUTTERPAN ACROSS ENTRANCE MAY BE WAVED BY APPROVAL OF CITY ENGINEER.
2. ENTRANCE WIDTH AND RADIUS SHALL BE SIZED TO ACCOMMODATE TURNING RADIUS OF PROPOSED TRUCKS TO/FROM SITE DEVELOPMENT.
3. VDOT STANDARDS MAY BE SUBSTITUTED IF APPROVED BY CITY ENGINEER.
4. GRAVEL DRIVEWAYS ON COLLECTOR AND ARTERIAL STREETS SHALL BE PAVED A MINIMUM OF 10 FEET FROM EDGE OF CURB OR TO THE RIGHT–OF–WAY LINE, WHICHEVER IS GREATER.
5. FOR ONE–WAY DRIVEWAY, THE WIDTH IS 15' MINIMUM and 24' MAXIMUM. ENTRANCE/EXIT SHALL BE MARKED ACCORDINGLY BY SIGN OR PAVEMENT ARROW.
6. ENTIRE ENTRANCE INCLUDING GUTTER AND APRON SHALL BE POURED MONOLITHICALLY.
7. WIDTH OF CURB & GUTTER SHALL MATCH WIDTH OF EXISTING CURB & GUTTER.

THE CITY OF LYNCHBURG

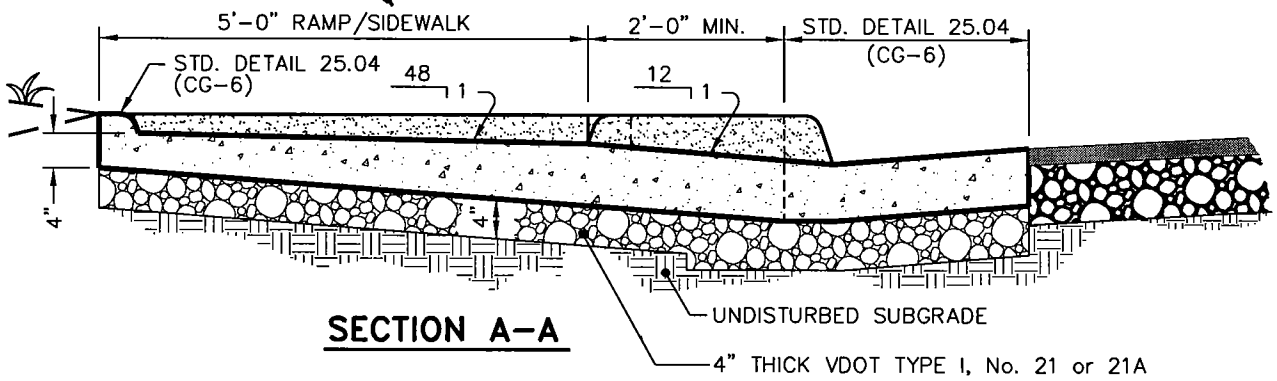
COMMERCIAL DRIVEWAY ENTRANCE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.12
REVISION DATE:	SHEET #:
07-17-03	1 OF 1



AT * , 2" HIGHER THAN EDGE OF PAVEMENT
AT ** , SAME AS TOP OF CURB



SECTION A–A

THE CITY OF LYNCHBURG

TYPE 1 – HANDICAP RAMP for TEE INTERSECTION with GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.13
REVISION DATE:	SHEET #:
07-17-03	1 OF 2

NOTES:

1. CROSS AND SIDE RAMPS SHALL NOT EXCEED A SLOPE OF 12:1.

2. CROSS RAMP SHALL BE STAMPED WITH A MINIMUM OF 2'X3' WARNING PAD OF TRUNCATED DOME PATTERN MEETING THE CURRENT AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) TO DEFINE THE BOUNDARY BETWEEN THE SIDEWALK AND THE STREET AS SHOWN IN DETAIL. THE CROSS AND SIDE RAMP SURFACES SHALL BE TREATED WITH LITHOCROME A28–TILE RED COLOR HARDENER AND RELEASE AGENT TO PRODUCE A 70% CONTRAST WITH SURROUNDING CONCRETE SURFACES. CONTRACTOR TO SUBMIT PIGMENT MANUFACTURER'S COLOR CHART, CHIP SAMPLE, AND IMPRINT TEMPLATE FOR APPROVAL. THE SURFACE FINISH OF SIDE RAMPS SHALL MATCH ADJACENT SIDEWALK.

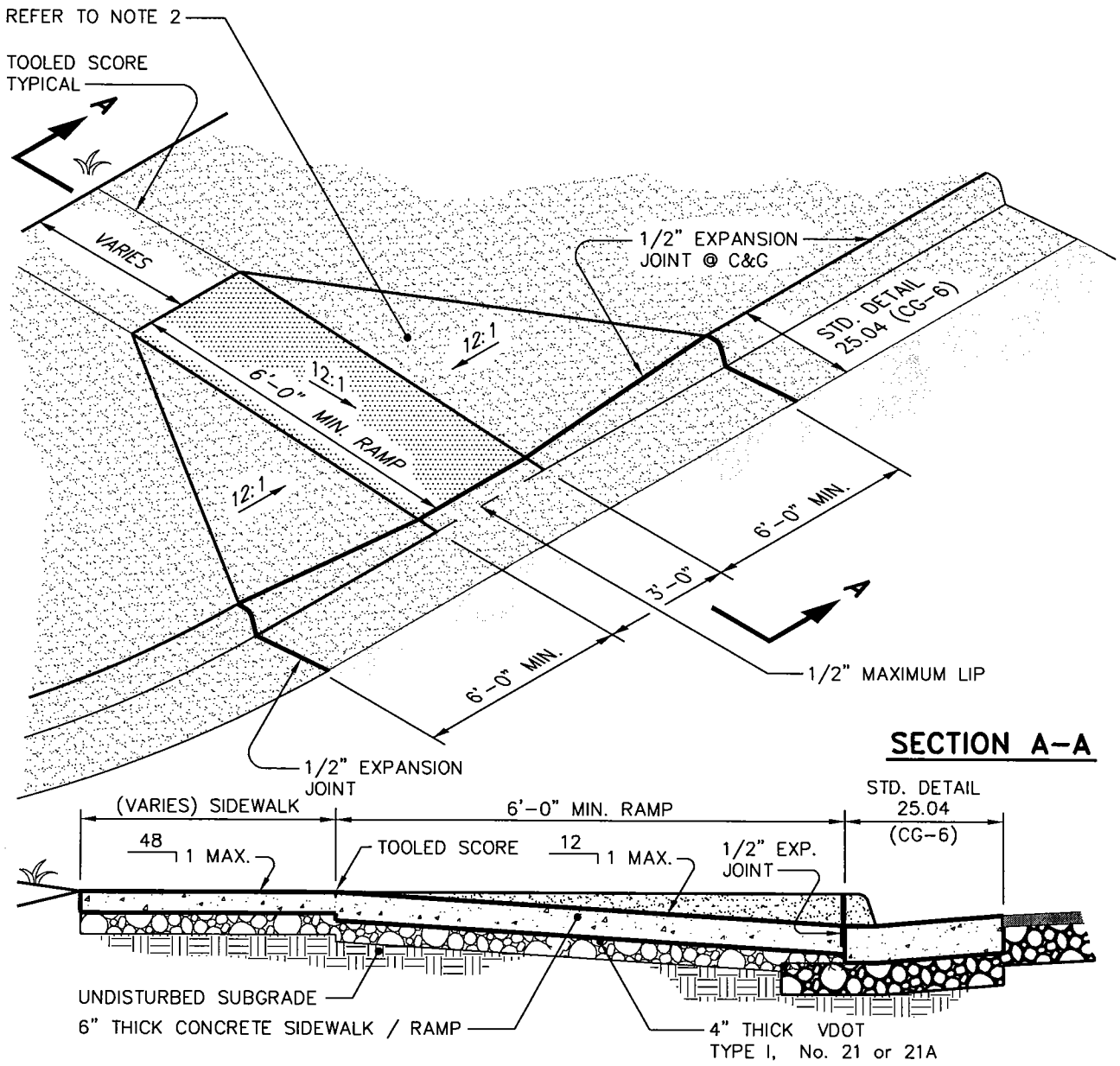
3. CURB RAMPS ARE TO BE LOCATED WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT–OF–WAY OF A ROADWAY CROSSES AS SHOWN ON PLANS OR AS DIRECTED BY CITY ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC.

THE CITY OF LYNCHBURG

TYPE 1 – HANDICAP RAMP for TEE INTERSECTION with GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.13
REVISION DATE:	SHEET #:
07–21–03	2 OF 2



SECTION A-A

THE CITY OF LYNCHBURG

TYPE 2 – HANDICAP RAMP for INTERSECTION without GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.15
REVISION DATE:	SHEET #:
07-17-03	1 OF 2

NOTES:

1. CROSS AND SIDE RAMPS SHALL NOT EXCEED A SLOPE OF 12:1.

2. CROSS RAMP SHALL BE STAMPED WITH A MINIMUM OF 2'X3' WARNING PAD OF TRUNCATED DOME PATTERN MEETING THE CURRENT AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) TO DEFINE THE BOUNDARY BETWEEN THE SIDEWALK AND THE STREET AS SHOWN IN DETAIL. THE CROSS AND SIDE RAMP SURFACES SHALL BE TREATED WITH LITHOCROME A28-TILE RED COLOR HARDENER AND RELEASE AGENT TO PRODUCE A 70% CONTRAST WITH SURROUNDING CONCRETE SURFACES. CONTRACTOR TO SUBMIT PIGMENT MANUFACTURER'S COLOR CHART, CHIP SAMPLE, AND IMPRINT TEMPLATE FOR APPROVAL. THE SURFACE FINISH OF SIDE RAMPS SHALL MATCH ADJACENT SIDEWALK.

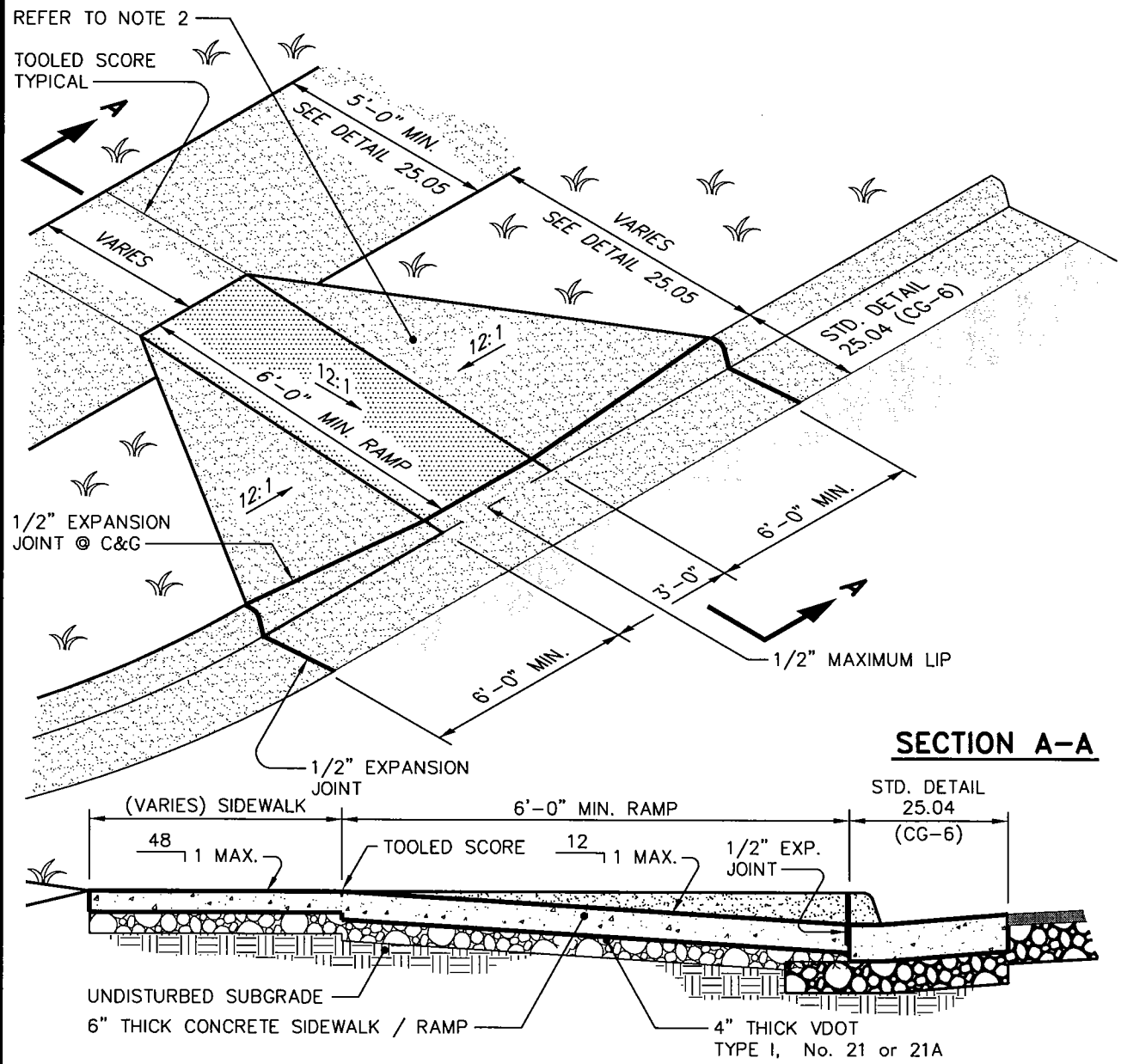
3. CURB RAMPS ARE TO BE LOCATED WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT-OF-WAY OF A ROADWAY CROSSES AS SHOWN ON PLANS OR AS DIRECTED BY CITY ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC.

THE CITY OF LYNCHBURG

TYPE 2 - HANDICAP RAMP for INTERSECTION without GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.15
REVISION DATE:	SHEET #:
07-21-03	2 OF 2



SECTION A-A

THE CITY OF LYNCHBURG

TYPE 3 – HANDICAP RAMP for INTERSECTION with GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.16
REVISION DATE:	SHEET #:
07-17-03	1 OF 2

NOTES:

1. CROSS AND SIDE RAMPS SHALL NOT EXCEED A SLOPE OF 12:1.

2. CROSS RAMP SHALL BE STAMPED WITH A MINIMUM OF 2'X3' WARNING PAD OF TRUNCATED DOME PATTERN MEETING THE CURRENT AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) TO DEFINE THE BOUNDARY BETWEEN THE SIDEWALK AND THE STREET AS SHOWN IN DETAIL. THE CROSS AND SIDE RAMP SURFACES SHALL BE TREATED WITH LITHOCROME A28-TILE RED COLOR HARDENER AND RELEASE AGENT TO PRODUCE A 70% CONTRAST WITH SURROUNDING CONCRETE SURFACES. CONTRACTOR TO SUBMIT PIGMENT MANUFACTURER'S COLOR CHART, CHIP SAMPLE, AND IMPRINT TEMPLATE FOR APPROVAL. THE SURFACE FINISH OF SIDE RAMPS SHALL MATCH ADJACENT SIDEWALK.

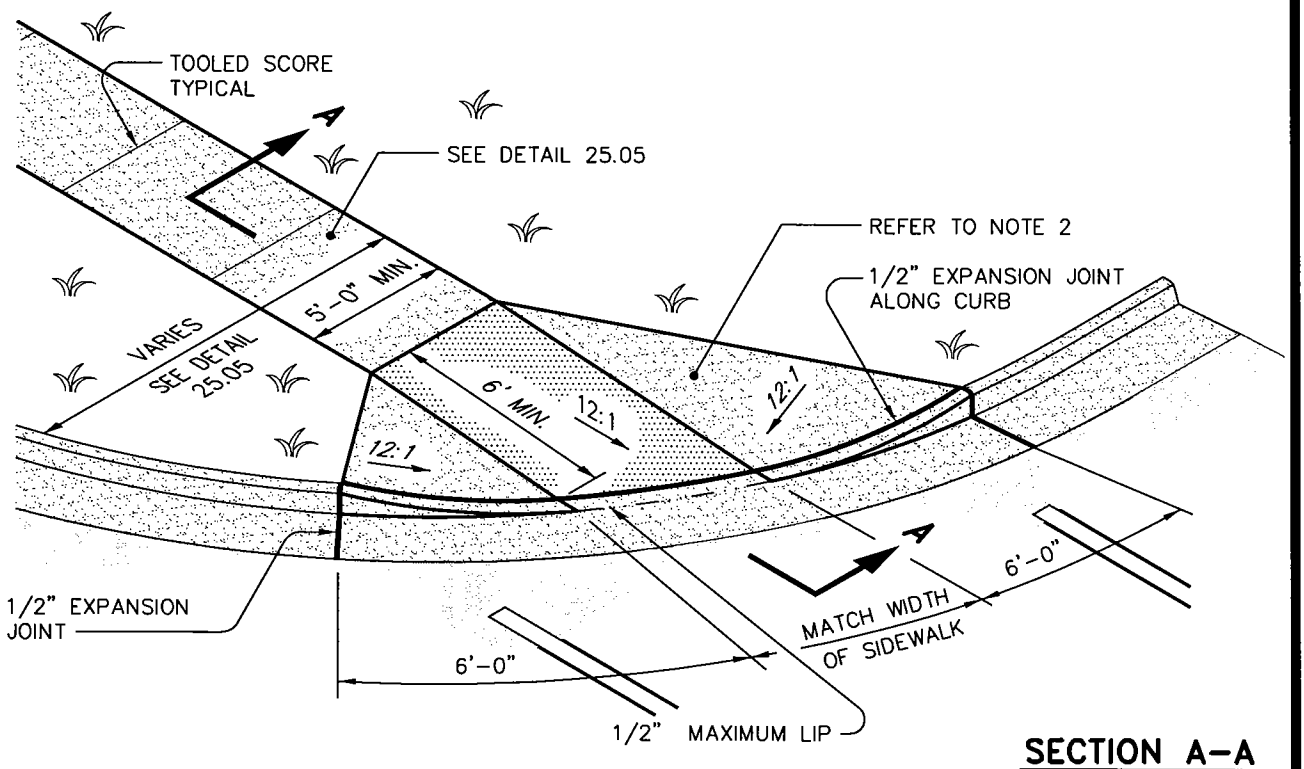
3. CURB RAMPS ARE TO BE LOCATED WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT-OF-WAY OF A ROADWAY CROSSES AS SHOWN ON PLANS OR AS DIRECTED BY CITY ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC.

THE CITY OF LYNCHBURG

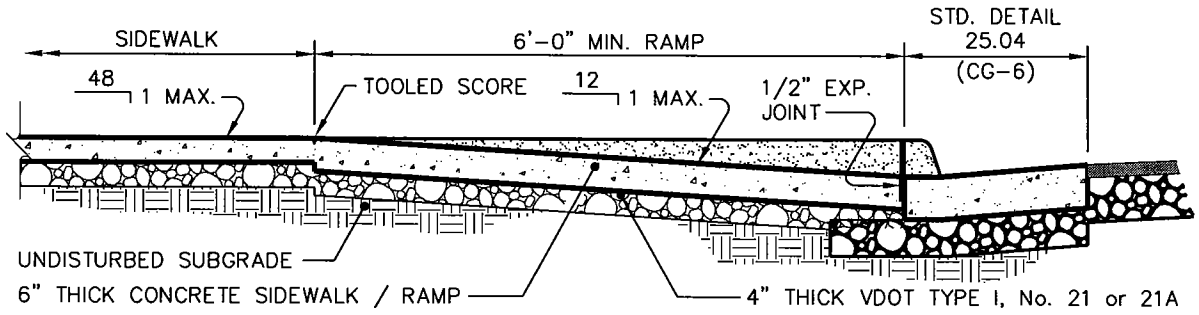
TYPE 3 - HANDICAP RAMP for INTERSECTION with GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.16
REVISION DATE:	SHEET #:
07-21-03	2 OF 2



SECTION A-A



THE CITY OF LYNCHBURG

TYPE 4 - HANDICAP RAMP for INTERSECTION with GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.17
REVISION DATE:	SHEET #:
07-17-03	1 OF 2

NOTES:

1. CROSS AND SIDE RAMPS SHALL NOT EXCEED A SLOPE OF 12:1.

2. CROSS RAMP SHALL BE STAMPED WITH A MINIMUM OF 2'X3' WARNING PAD OF TRUNCATED DOME PATTERN MEETING THE CURRENT AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) TO DEFINE THE BOUNDARY BETWEEN THE SIDEWALK AND THE STREET AS SHOWN IN DETAIL. THE CROSS AND SIDE RAMP SURFACES SHALL BE TREATED WITH LITHOCROME A28–TILE RED COLOR HARDENER AND RELEASE AGENT TO PRODUCE A 70% CONTRAST WITH SURROUNDING CONCRETE SURFACES. CONTRACTOR TO SUBMIT PIGMENT MANUFACTURER'S COLOR CHART, CHIP SAMPLE, AND IMPRINT TEMPLATE FOR APPROVAL. THE SURFACE FINISH OF SIDE RAMPS SHALL MATCH ADJACENT SIDEWALK.

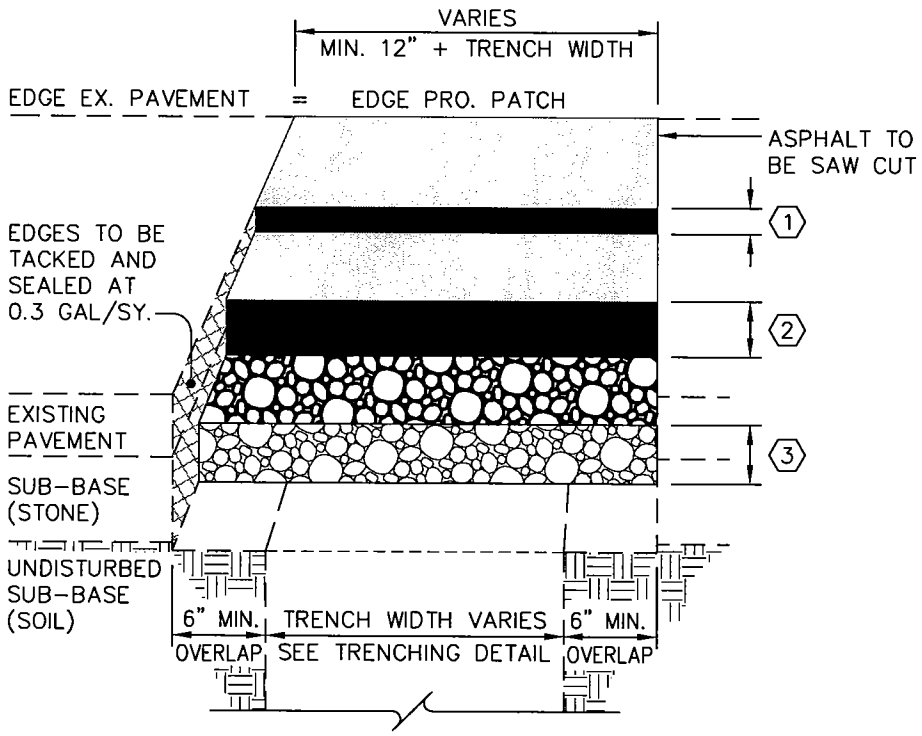
3. CURB RAMPS ARE TO BE LOCATED WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT–OF–WAY OF A ROADWAY CROSSES AS SHOWN ON PLANS OR AS DIRECTED BY CITY ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC.

THE CITY OF LYNCHBURG

TYPE 4 – HANDICAP RAMP for INTERSECTION with GRASS STRIP

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.17
REVISION DATE:	SHEET #:
07–21–03	2 OF 2



PATCH DESIGN FOR ASPHALT STREETS

TYPE STREET	ARTERIAL and INDUSTRIAL	COLLECTOR	RESIDENTIAL
TYPE PATCH	TYPE A	TYPE B	TYPE C
⟨1⟩	2" SM-12.5D	2" SM-12.5D	1.5" SM-9.5D
⟨2⟩	8" BM25	6" BM25	4" BM25
⟨3⟩	7" VDOT NO.21A	4" VDOT NO.21A	4" VDOT NO.21A
PATCH DEPTH	TOTAL = 17"	TOTAL = 12"	TOTAL = 9.5"

NOTES:

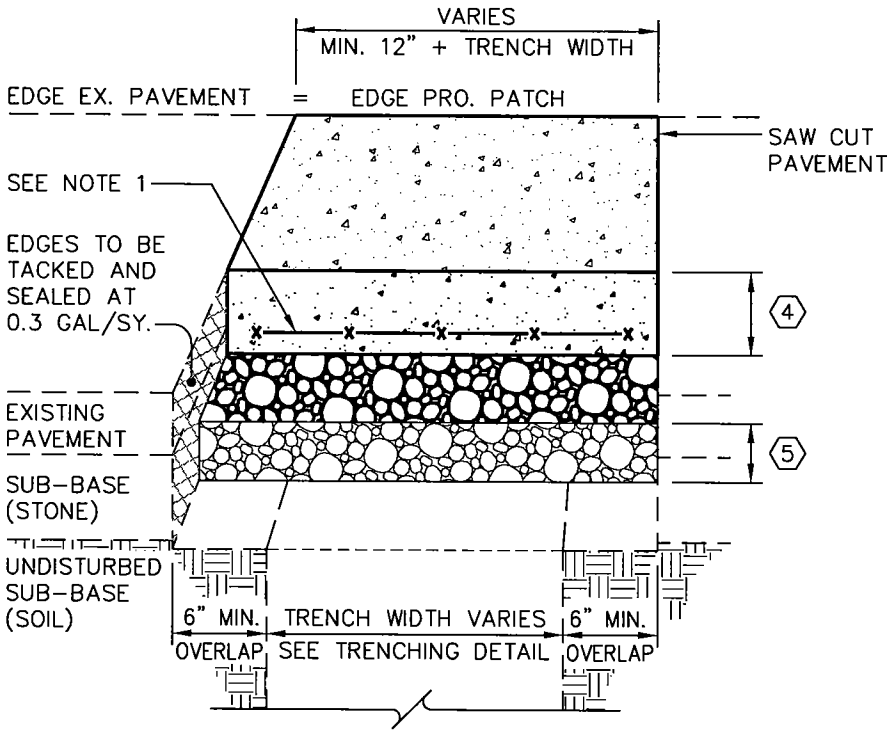
1. PAVEMENT SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

THE CITY OF LYNCHBURG

TRENCH PATCH
ASPHALT STREETS - TYPE A,B,& C

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.18
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



PATCH DESIGN FOR CONCRETE STREETS

TYPE STREET	ARTERIAL and INDUSTRIAL	COLLECTOR	RESIDENTIAL
TYPE PATCH	TYPE D	TYPE E	TYPE F
⟨4⟩	10" 3,000 PSI CONC.	8" 3,000 PSI CONC.	6" 3,000 PSI CONC.
⟨5⟩	4" VDOT NO.21A	4" VDOT NO.21A	4" VDOT NO.21A
PATCH DEPTH	14"	12"	10"

NOTES:

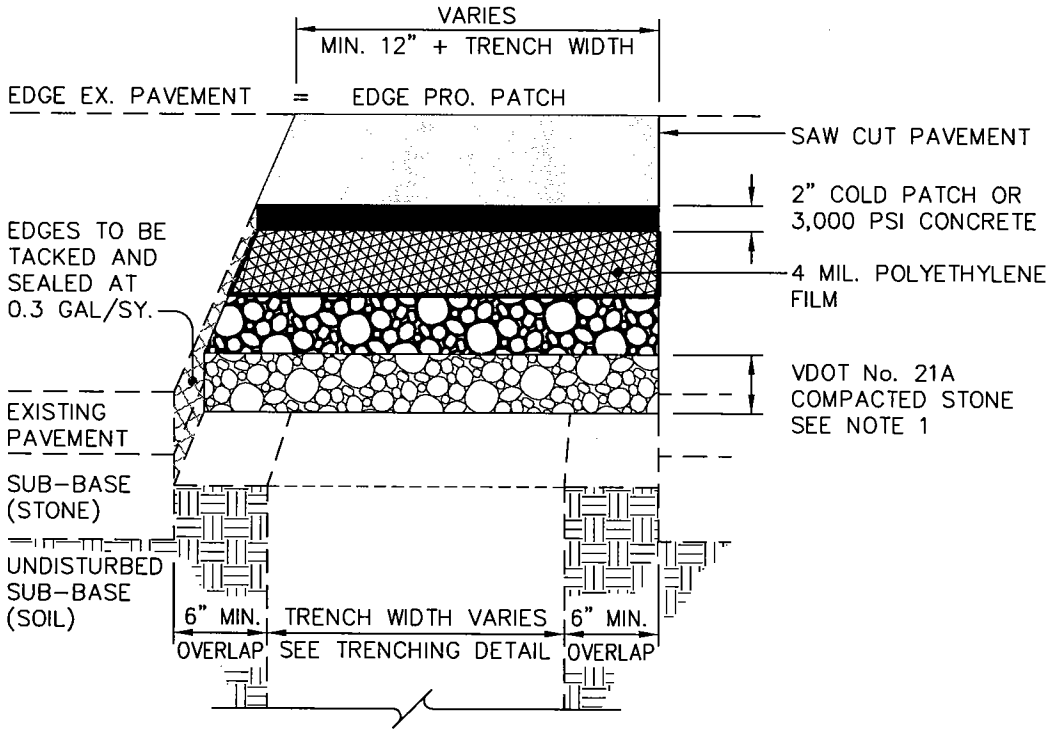
1. WHEN PIPE O.D. PLUS 2' OR EXCAVATED TRENCH WIDTH EXCEEDS 4 FEET, THEN WWF 6x6 W1.4 x W1.4 GAUGE IS REQUIRED SUSPENDED IN THE CONCRETE A MINIMUM OF 2 INCHES FROM BOTTOM OF CONCRETE PATCH. (NO. 4 REINFORCING BARS 12x12 IS AN ACCEPTABLE ALTERNATIVE FOR WWF.) THIS NOTE ONLY APPLIES TO PATCH D,E, & F.
2. PAVEMENT SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

THE CITY OF LYNCHBURG

TRENCH PATCH CONCRETE STREETS – TYPE D,E,& F

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.19
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

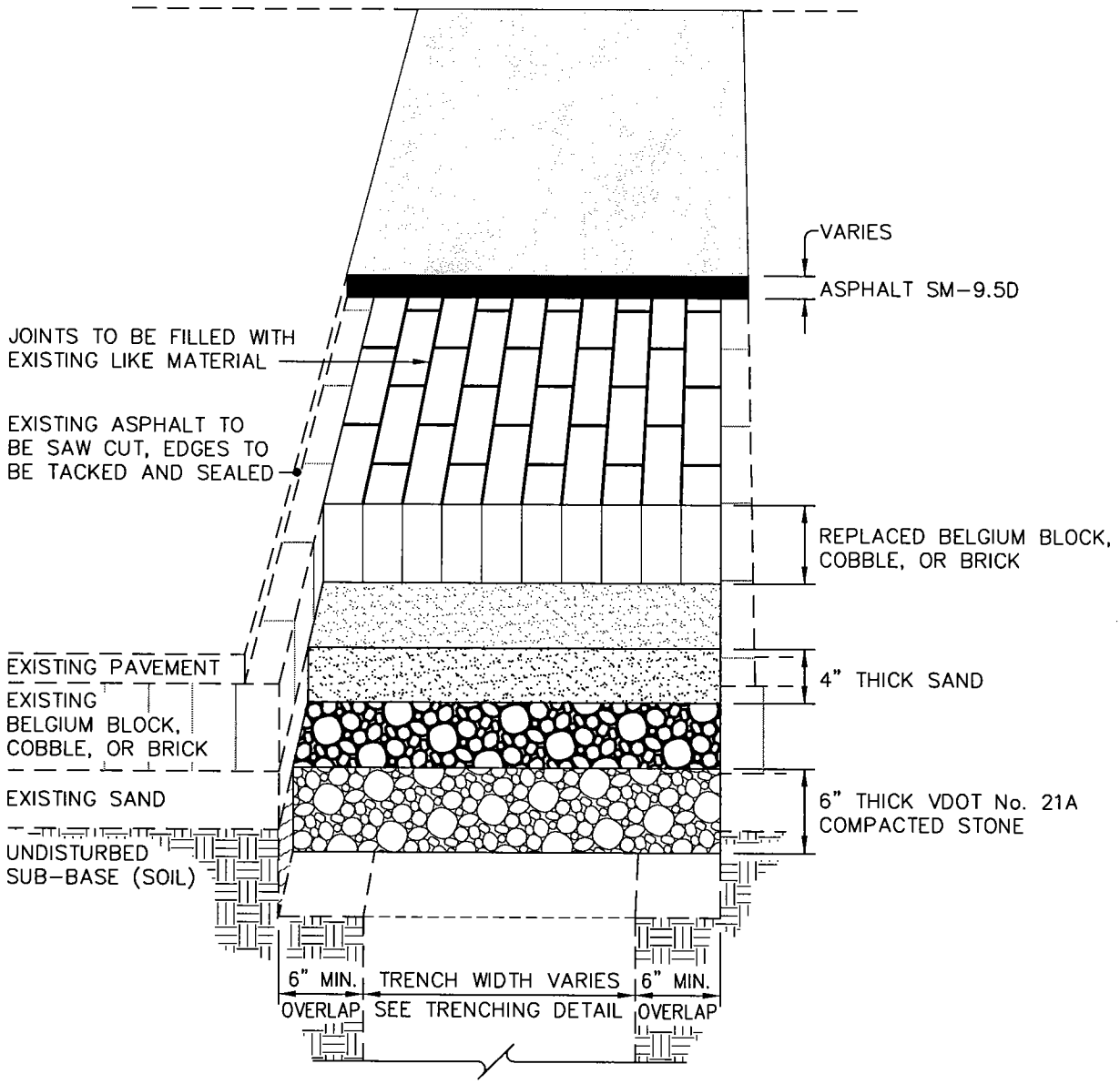
1. DEPTH OF COMPACTED STONE SHALL EQUAL COMBINED DEPTH OF REQUIRED BASE MIX ASPHALT AND AGGREGATE BASE AS SPECIFIED ON DETAIL 25.18 and 25.19 FOR CORRESPONDING STREET CLASSIFICATIONS
2. TEMPORARY PAVEMENT PATCH SHALL ONLY BE USED DURING WINTER MONTHS WHEN ASPHALT IS UNAVAILABLE.

THE CITY OF LYNCHBURG

TRENCH PATCH
TEMPORARY - TYPE G

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.20
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

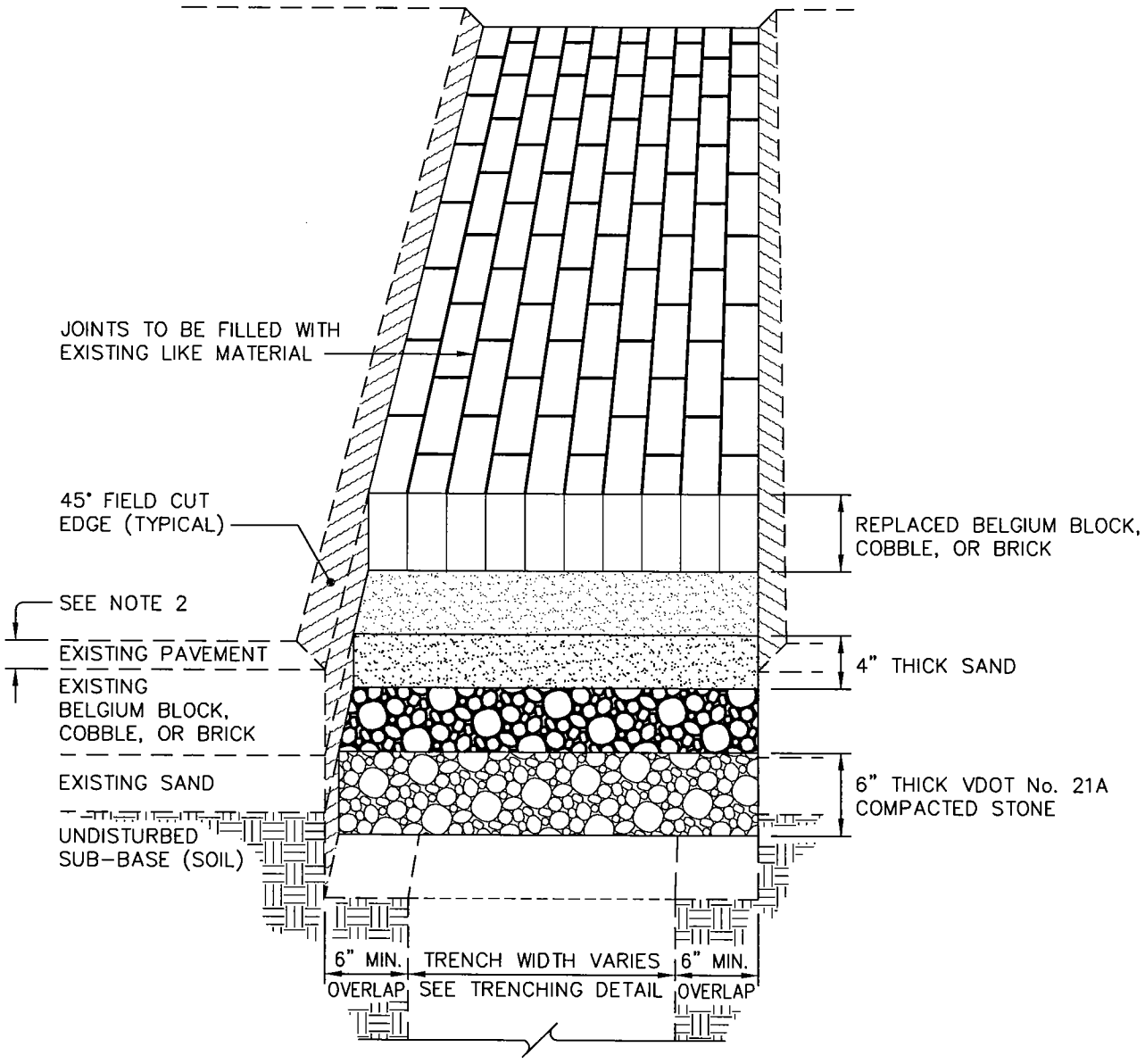
1. THIS DETAIL TO BE USED ONLY WHEN APPROVED BY DIRECTOR OF STREETS.

THE CITY OF LYNCHBURG

TRENCH PATCH - HISTORICAL DISTRICT WITH ASPHALT OVERLAY - TYPE H

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.21
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

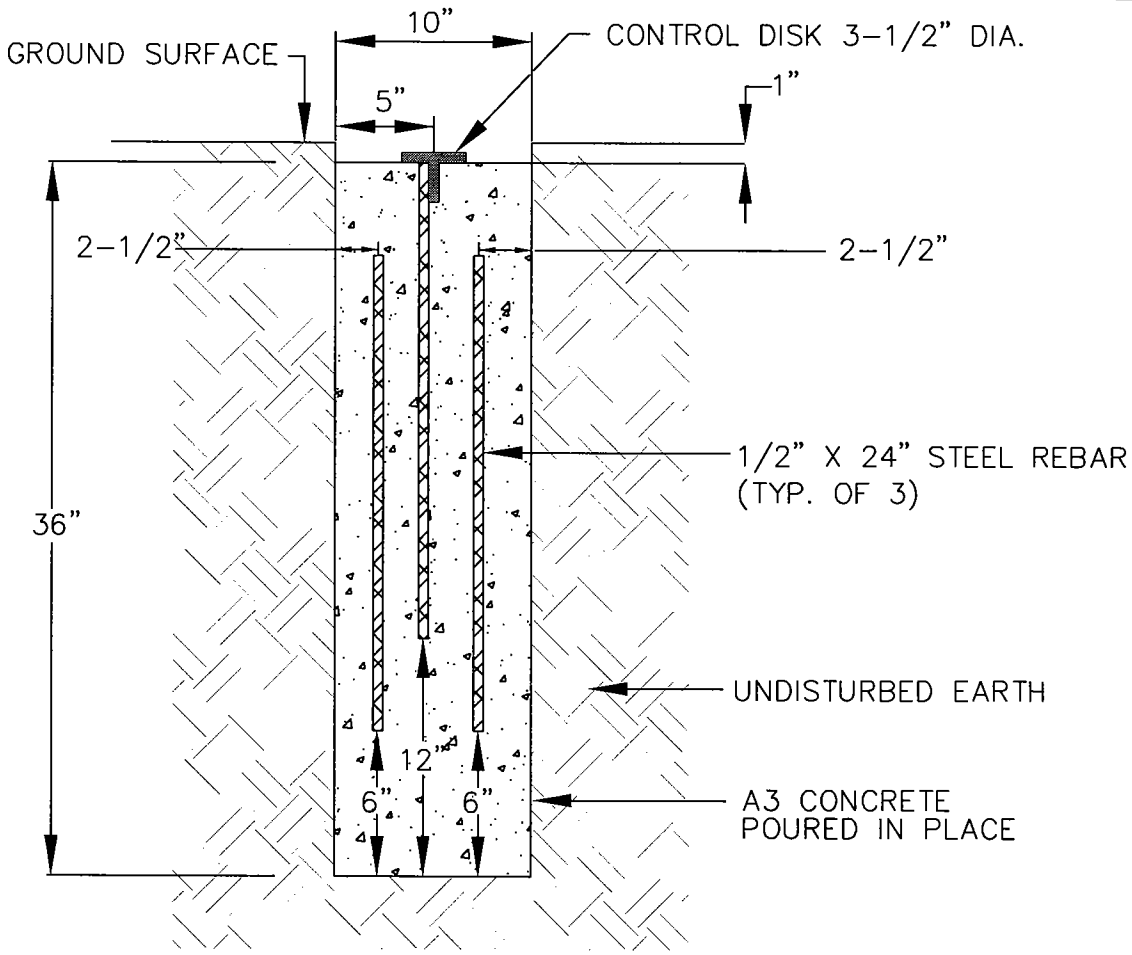
1. THIS DETAIL TO BE USED ONLY WHEN APPROVED BY DIRECTOR OF STREETS.
2. EXISTING ASPHALT OVERLAY CAN BE NO GREATER THAN 1 1/2 INCHES IN DEPTH.

THE CITY OF LYNCHBURG

TRENCH PATCH - HISTORICAL DISTRICT WITHOUT ASPHALT OVERLAY - TYPE I

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.22
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

1. IF THE MONUMENT IS TO BE SET IN A PAVED OR CONCRETE AREA, THE AREA SHALL BE CORE DRILLED AND THE CONTROL DISK SET IN CONCRETE WITH THE TOP OF THE DISK SET FLUSH WITH THE EXISTING SURFACE.
2. A MINIMUM OF TWO (2) CONTROL DISKS SHALL BE SET WITHIN SIGHT OF EACH OTHER WITH THE LONGEST POSSIBLE SIGHT DISTANCE, OR AS SPECIFIED BY THE CITY.
3. THE STANDARD CONTROL DISK WILL BE PROVIDED BY THE CITY AND INSTALLED BY CONTRACTOR.
4. HORIZONTAL CONTROL SHALL BE BASED ON NORTH AMERICAN DATUM 1983 (NAD 83), VIRGINIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE, AND VERTICAL DATUM SHALL BE BASED ON NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29). HORIZONTAL CONTROL COORDINATE VALUES SHALL BE EXPRESSED TO THE NEAREST THOUSANDTH OF A FOOT (0.001') AND VERTICAL CONTROL SHALL BE EXPRESSED TO THE NEAREST HUNDREDTH OF A FOOT (0.01'). ALL CONTROLS SHALL BE BASED ON THE U.S. SURVEY FOOT. A VIRGINIA STATE LICENSED SURVEYOR MUST CERTIFY THE COORDINATE VALUES OF THE CONTROL DISKS BEFORE THEY WILL BE ACCEPTED BY THE CITY.

THE CITY OF LYNCHBURG

HORIZONTAL CONTROL MONUMENT

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	25.23
REVISION DATE:	SHEET #:
08-20-03	1 OF 1

NOTES:
PMS DENOTES PANTONE MATCHING SYSTEM.
TYPE 1 SIGN IS 2'-8" x 4'.
TYPE 2 SIGN IS 4' x 6'.

Font: Helvetica Ultra Compressed

BUILDING FOR A NEW CENTURY

Project: AAAA BBBB CCCC Project
Project Number: 000

Contractor: XYZ Contractor & Sons
Contractor Foreman: John Smith
Phone: XXX-XXXX

Engineer: Wiley & Wilson
Engineer's Inspector: Jane Doe
CSO Citizen Information Line: 847-7246

Funding Provided by EPA Grant & Commonwealth of Virginia Grant

$0,000,000

Helvetica Narrow Bold

Font: Times Bold

PMS Green

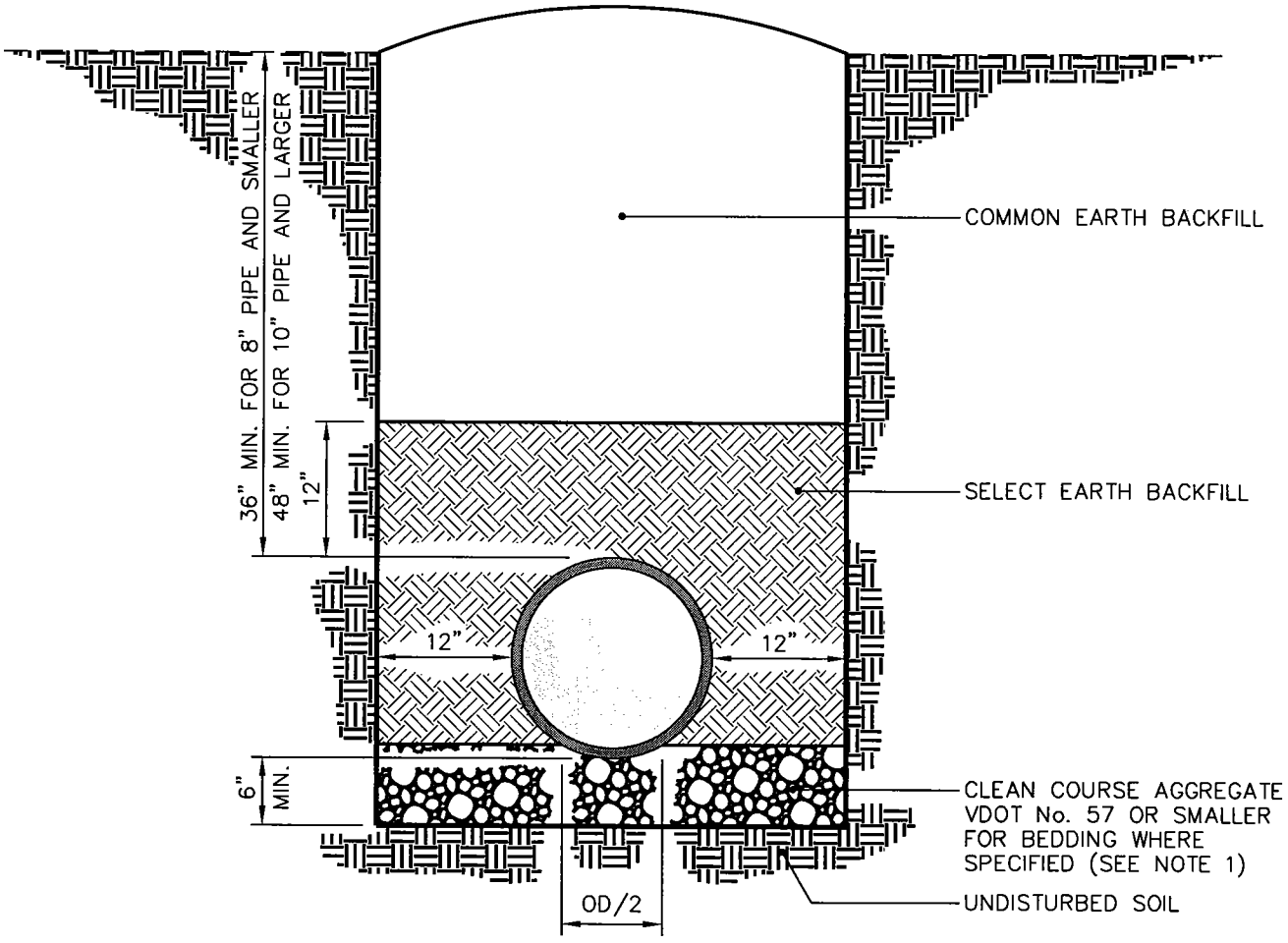
PMS 300

THE CITY OF LYNCHBURG

CSO PROJECT SIGN FORMAT (M-1B)
VRLF/EPA GRANT FUNDED PROJECTS

USE WITH CSO PROJECTS ONLY

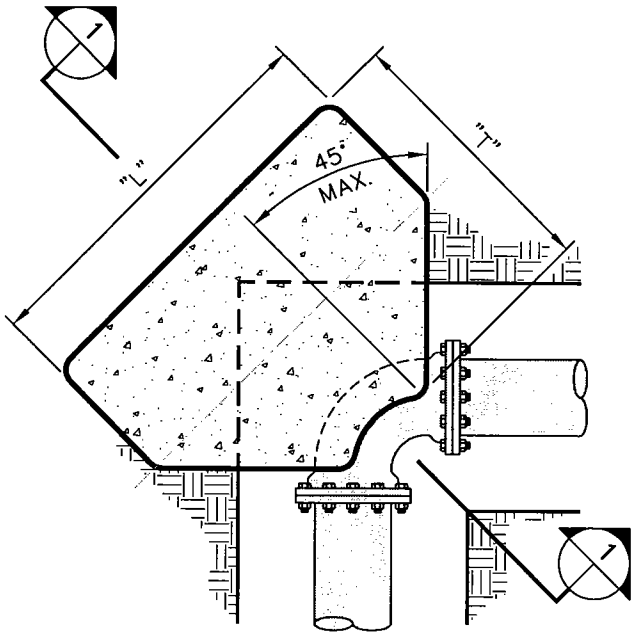
SCALE:	DETAIL #
NOT TO SCALE	25.24
REVISION DATE:	SHEET #:
12-06-03	1 OF 1



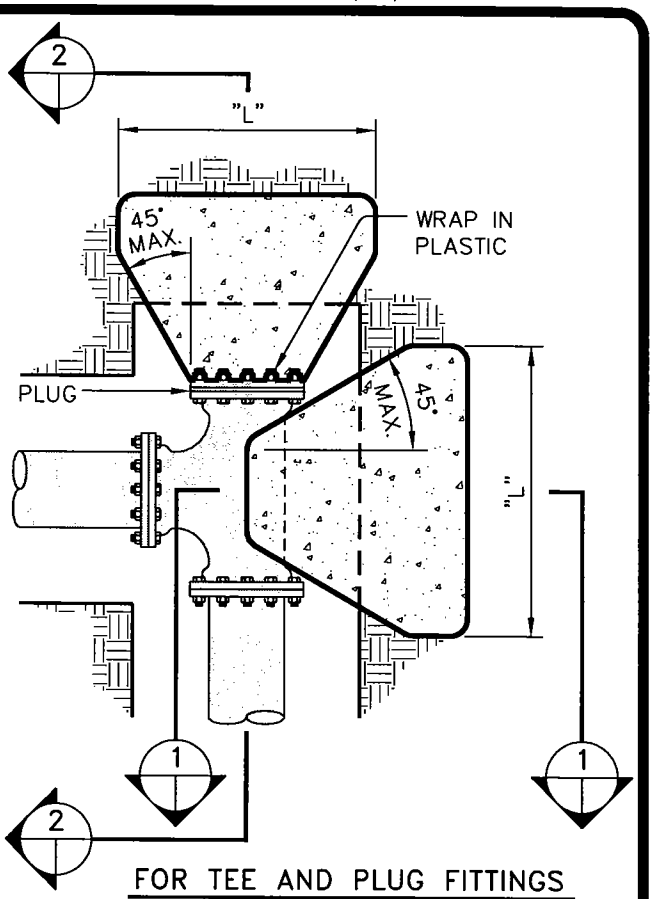
NOTES:

1. BEDDING SHALL BE REQUIRED FOR WATER LINES 16" IN DIAMETER AND LARGER OR IF ROCK IS ENCOUNTERED.
2. EXTRA DEPTH EXCAVATION SHALL BE PAID FOR AS ANYTHING BEYOND 4' OF COVER TO TOP OF PIPE.
3. ANY EXCAVATION BEYOND TRENCH LIMITS SHOWN ON DETAIL SHALL BE AT THE CONTRACTOR'S EXPENSE.

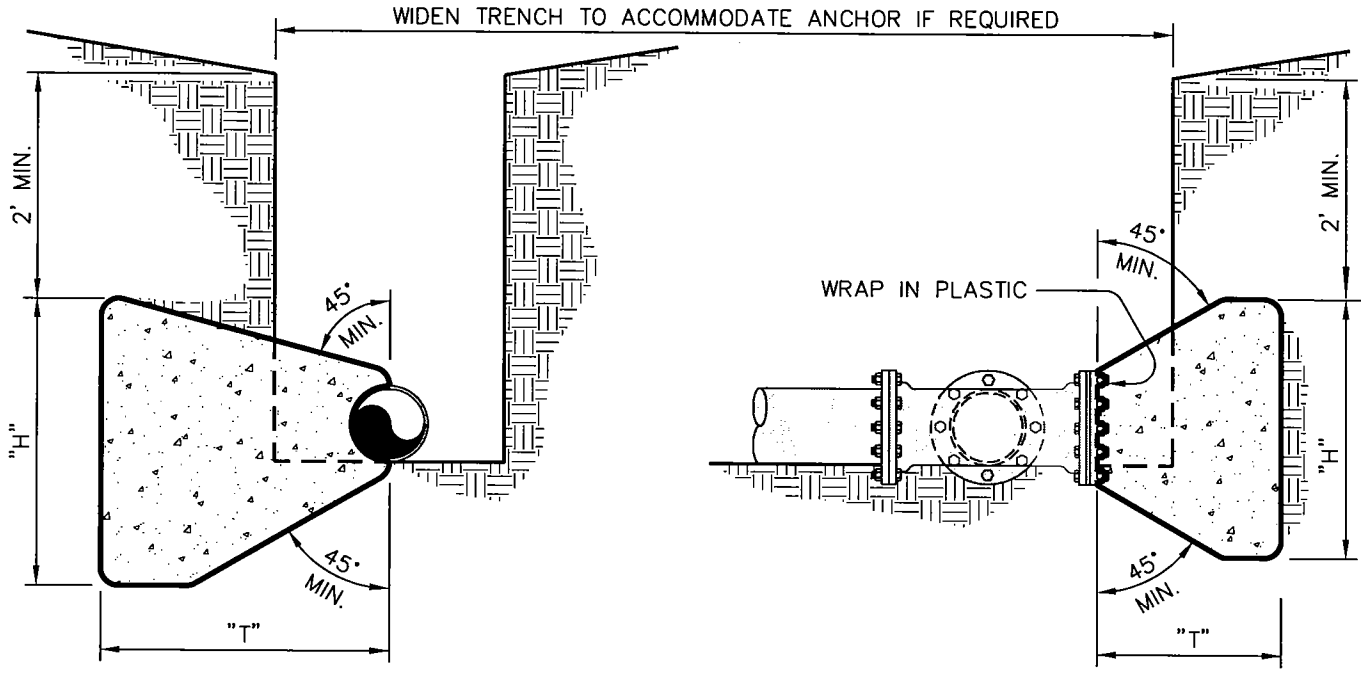
THE CITY OF LYNCHBURG			
WATER LINE TRENCH DETAIL		SCALE: NOT TO SCALE	DETAIL # 26.01
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY		REVISION DATE: 04-10-03	SHEET #: 1 OF 1



FOR ALL BENDS



FOR TEE AND PLUG FITTINGS



1 SECTION 1

SECTION 2 2

THE CITY OF LYNCHBURG

TYPE "F" HORIZONTAL ANCHOR BLOCKING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.02
REVISION DATE:	SHEET #:
04-10-03	1 OF 3

TYPE "F" HORIZONTAL ANCHOR BLOCK DATUM

TYPE FITTING	PIPE SIZE INCHES	DIMENSIONS (Ft.) "L"	"H"	"T"	VOL. CONC. CU. YARDS
TEST PRESSURE = 150 P.S.I. & BELOW					
11 1/4°	6	1.5	2	2.5	0.19
22 1/2°	6	1.5	2	2.52	0.19
45°	6	2	2.25	2.6	0.26
90°	6	2.5	2.5	3.01	0.40
TEE	6	2	2.25	2.5	0.25
PLUG	6	2	2.25	2.5	0.25
11 1/4°	8	1.66	2.16	2.67	0.23
22 1/2°	8	1.66	2.16	2.69	0.23
45°	8	2.66	2.66	2.77	0.41
90°	8	3.66	3.16	3.21	0.75
TEE	8	3.16	2.91	2.66	0.50
PLUG	8	3.16	2.91	2.66	0.50
11 1/4°	12	2	2.5	3	0.33
22 1/2°	12	2.5	2.75	3.02	0.44
45°	12	4	3.5	3.12	0.87
90°	12	5.5	4.25	3.62	1.63
TEE	12	4.5	3.75	3	0.99
PLUG	12	4.5	3.75	3	0.99
TEST PRESSURE = 151 P.S.I. to 200 P.S.I.					
11 1/4°	6	1.5	2	2.5	0.19
22 1/2°	6	1.5	2	2.52	0.19
45°	6	2	2.55	2.6	0.29
90°	6	3	2.75	3.01	0.52
TEE	6	2.5	2.5	2.5	0.34
PLUG	6	2.5	2.5	2.5	0.34
11 1/4°	8	1.66	2.16	2.67	0.23
22 1/2°	8	2.16	2.41	2.69	0.31
45°	8	3.16	2.91	2.77	0.52
90°	8	4.16	3.41	3.21	0.90
TEE	8	3.66	3.16	2.66	0.62
PLUG	8	3.66	3.16	2.66	0.62
11 1/4°	12	2	2.5	3	0.33
22 1/2°	12	3	3	3.02	0.56
45°	12	4.5	3.75	3.12	1.03
90°	12	6.5	4.75	3.62	2.14
TEE	12	5.5	4.25	3	1.35
PLUG	12	5.5	4.25	3	1.35
TEST PRESSURE = 201 P.S.I. to 250 P.S.I.					
11 1/4°	6	1.5	2	2.5	0.19
22 1/2°	6	1.5	2	2.52	0.19
45°	6	2.5	2.5	2.6	0.35
90°	6	3.5	3	3.01	0.64
TEE	6	3	2.75	2.5	0.43
PLUG	6	3	2.75	2.5	0.43
11 1/4°	8	1.66	2.16	2.67	0.23
22 1/2°	8	2.16	2.41	2.69	0.31
45°	8	3.66	3.16	2.77	0.64
90°	8	4.66	3.66	3.21	1.07
TEE	8	4.16	3.41	2.66	0.75
PLUG	8	4.16	3.41	2.66	0.75
11 1/4°	12	2.5	2.75	3	0.44
22 1/2°	12	3.5	3.25	3.02	0.69
45°	12	5.5	4.25	3.12	1.41
90°	12	7.5	5.25	3.62	2.71
TEE	12	6	4.5	3	1.56
PLUG	12	6	4.5	3	1.56

THE CITY OF LYNCHBURG

TYPE "F" HORIZONTAL ANCHOR BLOCKING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE

DETAIL # 26.02

REVISION DATE: 10-21-04

SHEET #: 2 OF 3

TYPE "F" HORIZONTAL ANCHOR BLOCK DATUM					
TYPE FITTING	PIPE SIZE INCHES	DIMENSIONS (Ft.)			VOL. CONC. CU. YARDS
		"L"	"H"	"T"	
TEST PRESSURE = 150 P.S.I. & BELOW					
11 1/4°	16	3	2	3	0.48
22 1/2°	16	4	3	3	0.93
45°	16	6	4	3	1.81
90°	16	8	5.5	3.75	3.92
TEE	16	8	5.5	2.67	3.02
PLUG	16	8	5.5	2.67	3.02
11 1/4°	24	4.5	3	4	1.31
22 1/2°	24	6	4.5	4	2.56
45°	24	8.5	6.25	4	4.97
90°	24	12	8	4.5	9.84
TEE	24	12	8	4	8.94
PLUG	24	12	8	4	8.94
TEST PRESSURE = 151 P.S.I. to 200 P.S.I.					
11 1/4°	16	3	2.67	3	0.63
22 1/2°	16	4.5	3.5	3	1.20
45°	16	7.5	4.25	3	2.40
90°	16	10	5.75	3.75	5.11
TEE	16	10	5.75	5	6.46
PLUG	16	10	5.75	5	6.46
11 1/4°	24	5	3.5	4	1.68
22 1/2°	24	7	5	4	3.30
45°	24	10	7	4	6.54
90°	24	13	10	4.5	13.31
TEE	24	13	10	4.5	13.31
PLUG	24	13	10	4.5	13.31
TEST PRESSURE = 201 P.S.I. to 250 P.S.I.					
11 1/4°	16	3.5	3	3	0.81
22 1/2°	16	5.5	3.67	3	1.53
45°	16	7.5	5.25	3	2.95
90°	16	12	6	3.75	6.38
TEE	16	12	6	4	6.72
PLUG	16	12	6	4	6.72
11 1/4°	24	6	3.75	4	2.14
22 1/2°	24	8	5.5	4	4.13
45°	24	12	7.25	4	8.11
90°	24	14	11.5	4.75	17.21
TEE	24	14	11.5	4.75	17.21
PLUG	24	14	11.5	4.75	17.21

THE CITY OF LYNCHBURG

TYPE "F" HORIZONTAL ANCHOR BLOCKING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE

DETAIL # 26.02

REVISION DATE: 04-10-03

SHEET #: 3 OF 3

TIE ROD ANCHORS DATUM

PIPE SIZE (INCHES)	ROD DIAMETER (INCHES)	NUMBER OF A307 RODS REQUIRED
TEST PRESSURE = 150 P.S.I. & BELOW		
6	3/4	2
8	3/4	2
10	3/4	2
12	3/4	4
16	3/4	6
20	3/4	8
24	1	8
30	1	10
TEST PRESSURE = 151 P.S.I. to 200 PSI		
6	3/4	2
8	3/4	2
10	3/4	4
12	3/4	6
16	3/4	8
20	3/4	12
24	1	10
30	1	14
TEST PRESSURE = 201 P.S.I. to 250 P.S.I.		
6	3/4	4
8	3/4	4
10	3/4	4
12	3/4	6
16	3/4	12
20	3/4	14
24	1	16
30	1	20

TIE RODS SHALL BE A307 CADMIUM COATED TIE RODS.

THE CITY OF LYNCHBURG

TIE ROD ANCHORS DATUM CHART

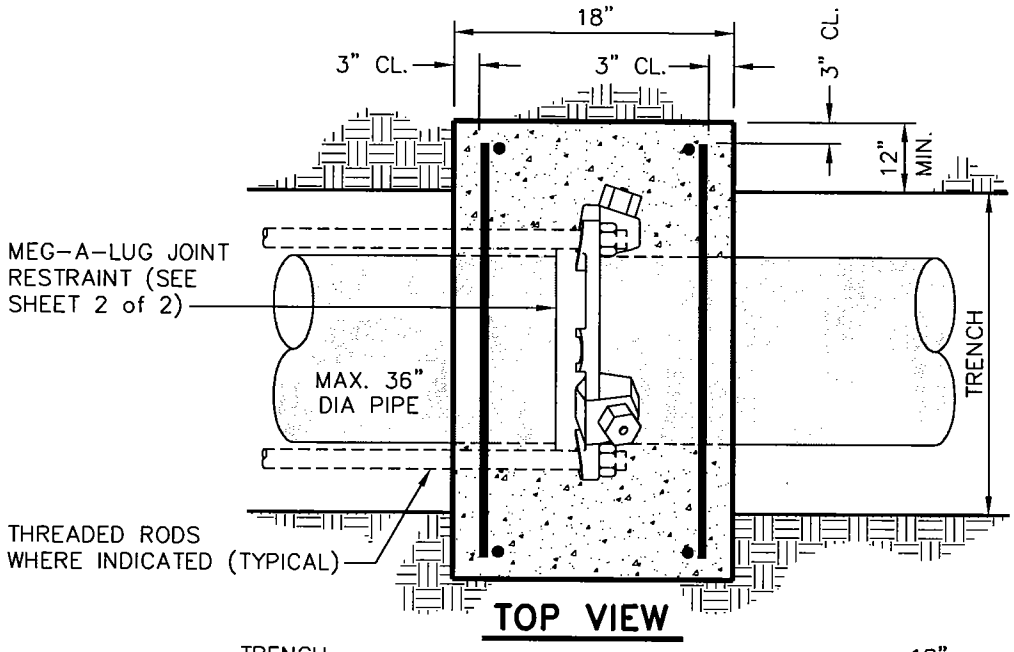
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE

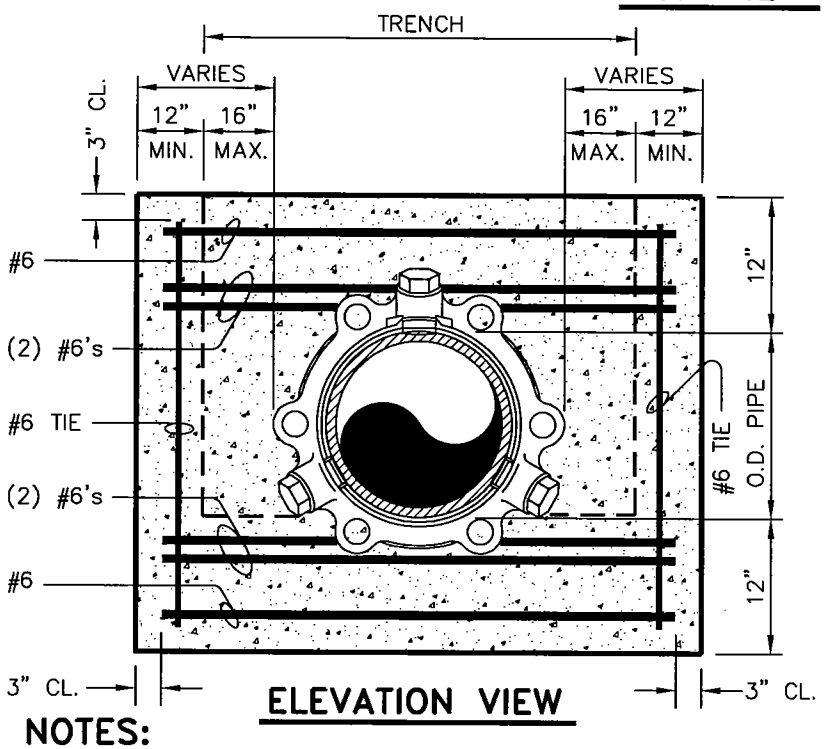
DETAIL # 26.03

REVISION DATE: 04-10-03

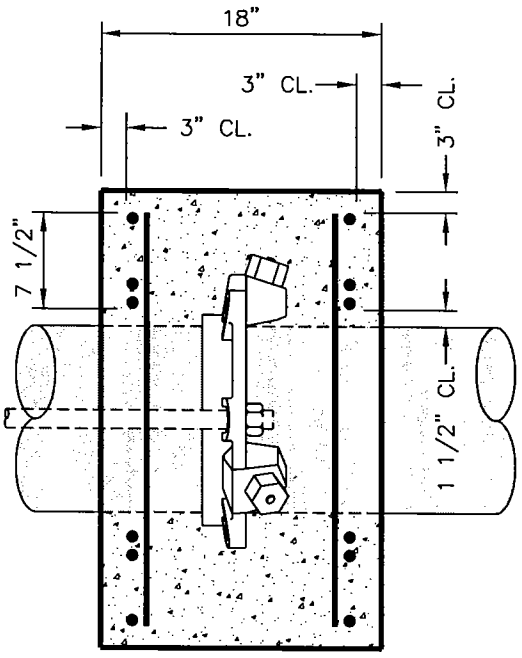
SHEET #: 1 OF 1



TOP VIEW



ELEVATION VIEW



SIDE VIEW

NOTES:

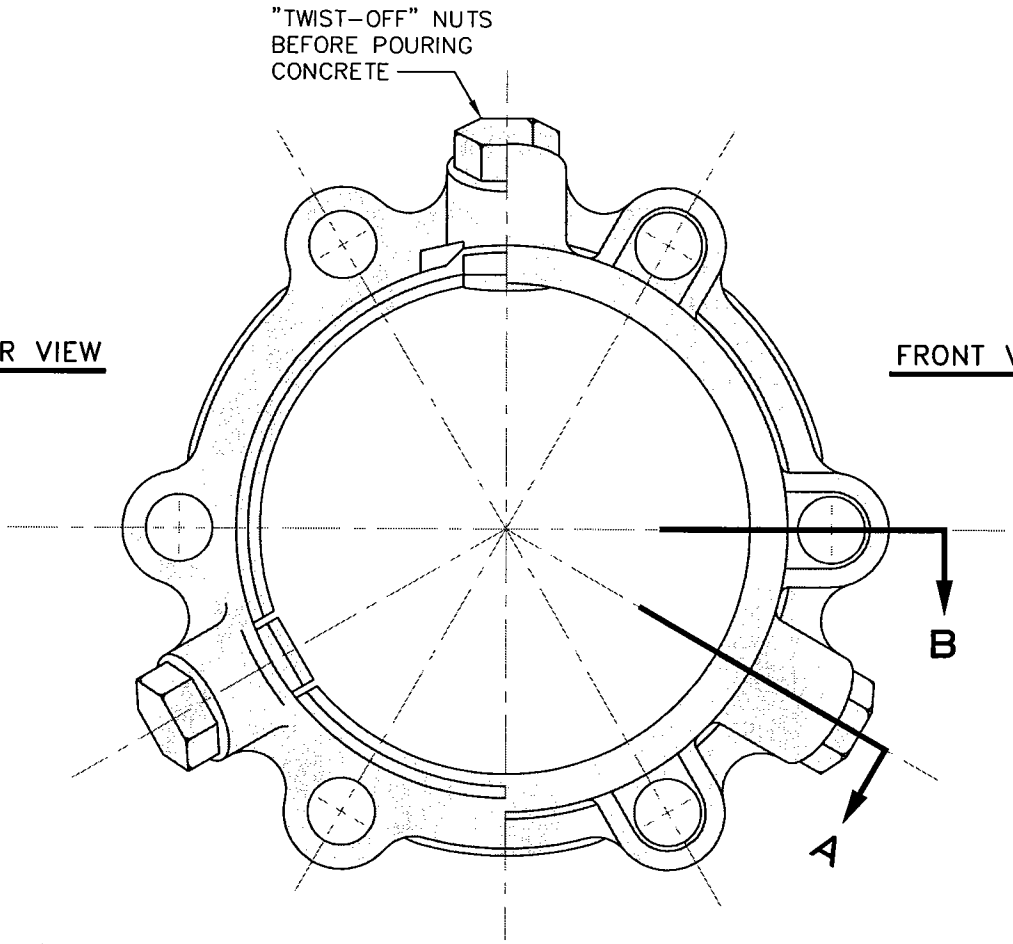
1. CONCRETE SHALL BE 3000 P.S.I.
2. REINFORCING BARS SHALL BE DEFORMED, AND TIED TOGETHER.
3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK(S) INSTALLATION SHALL BE THE MINIMUM WIDTH.
4. BACKFILL AND COMPACT IN 6" LAYERS.
5. PLACE THRUST COLLAR ON ONE FULL JOINT OF PIPE.
6. LAST JOINT OF PIPE WITH THRUST COLLAR TO BE MECHANICAL JOINT PIPE.
7. PLACE MEG-A-LUG 4' FROM PLUG END OF PIPE.

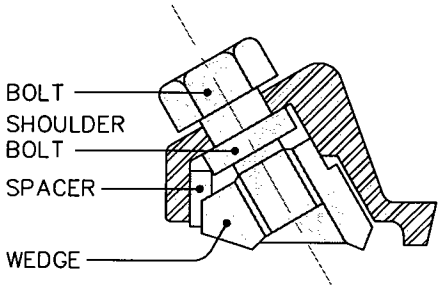
THE CITY OF LYNCHBURG

THRUST COLLAR & BLOCKING DETAIL

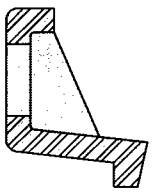
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.04
REVISION DATE:	SHEET #:
04-10-03	1 OF 2





SECTION A



SECTION B

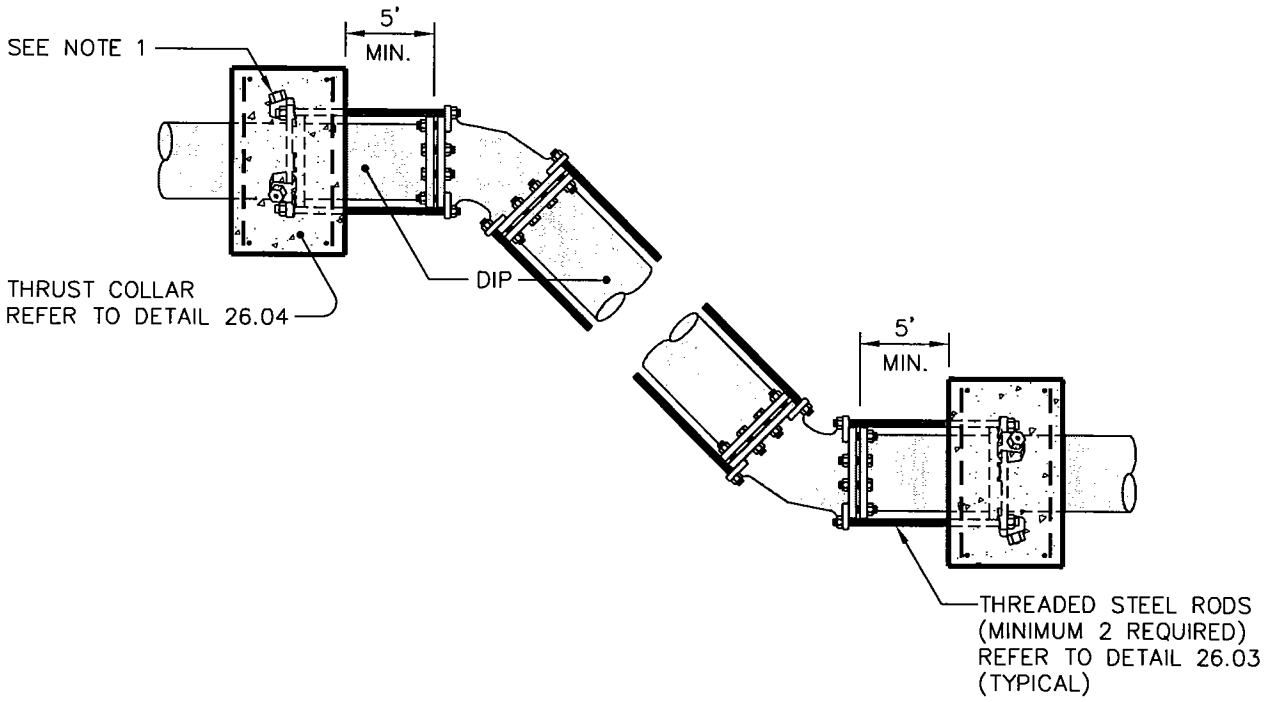
⚠ A "MEGALUG" SERIES 1100 MECHANICAL JOINT RESTRAINT SHALL BE PLACED ON DIP. CONCRETE & REINFORCEMENT STEEL SHALL ALSO BE AS SHEET 1 of 2.

THE CITY OF LYNCHBURG

MEG–A–LUG
THRUST RING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.04
REVISION DATE:	SHEET #:
04–10–03	2 OF 2



NOTES:

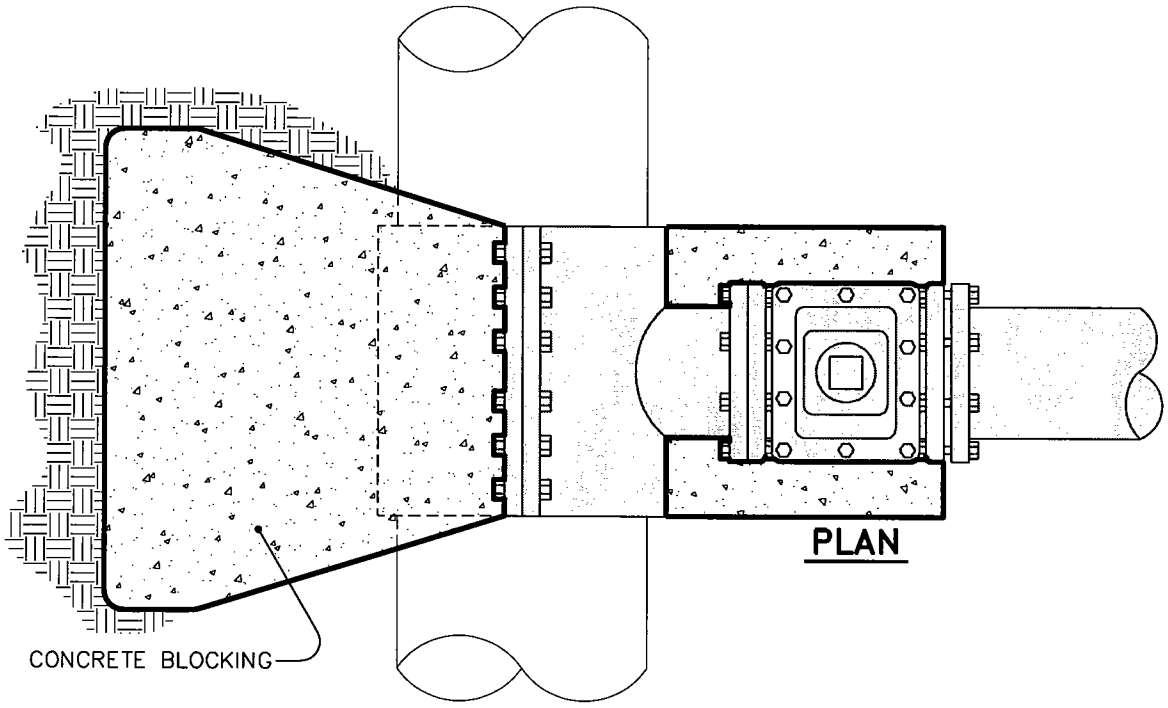
1. MEG–A–LUG JOINT RESTRAINT SHALL BE USED.

THE CITY OF LYNCHBURG

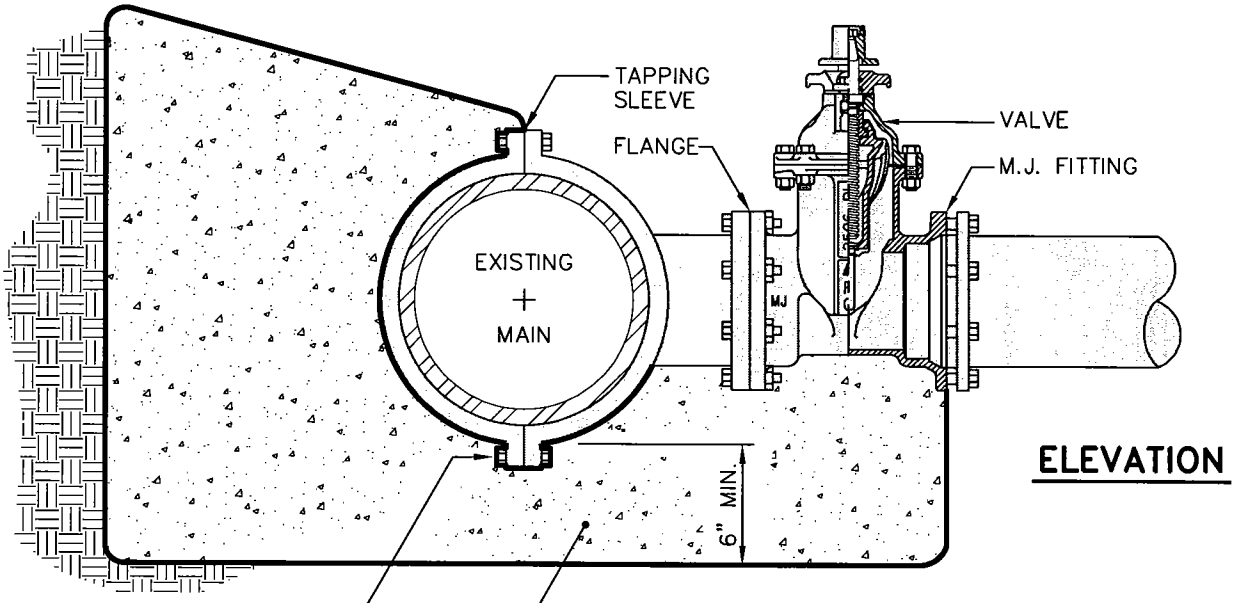
VERTICAL BEND IN WATER LINE DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.05
REVISION DATE:	SHEET #:
04–10–03	1 OF 1



PLAN



ELEVATION

NOTES

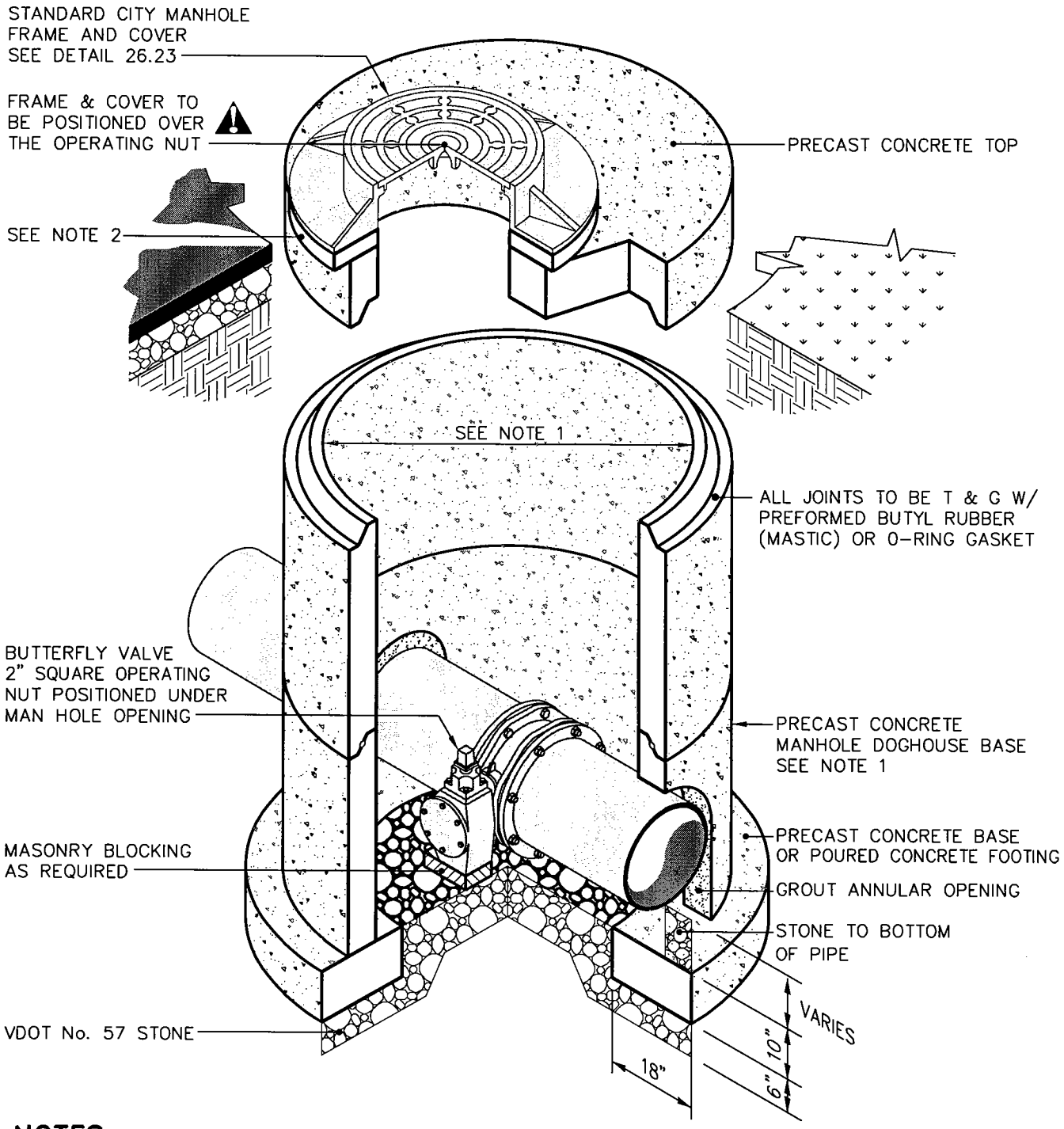
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS. (WRAP IN PLASTIC)
2. SEE TYPE "F" (HORIZONTAL) ANCHOR BLOCK DETAIL 26.02 FOR AREA OF CONCRETE REQUIRED.
3. TAPPING SLEEVE SHALL BE A MINIMUM OF 4' FROM NEAREST PIPE JOINT.

THE CITY OF LYNCHBURG

TAPPING SLEEVE & VALVE DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.06
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

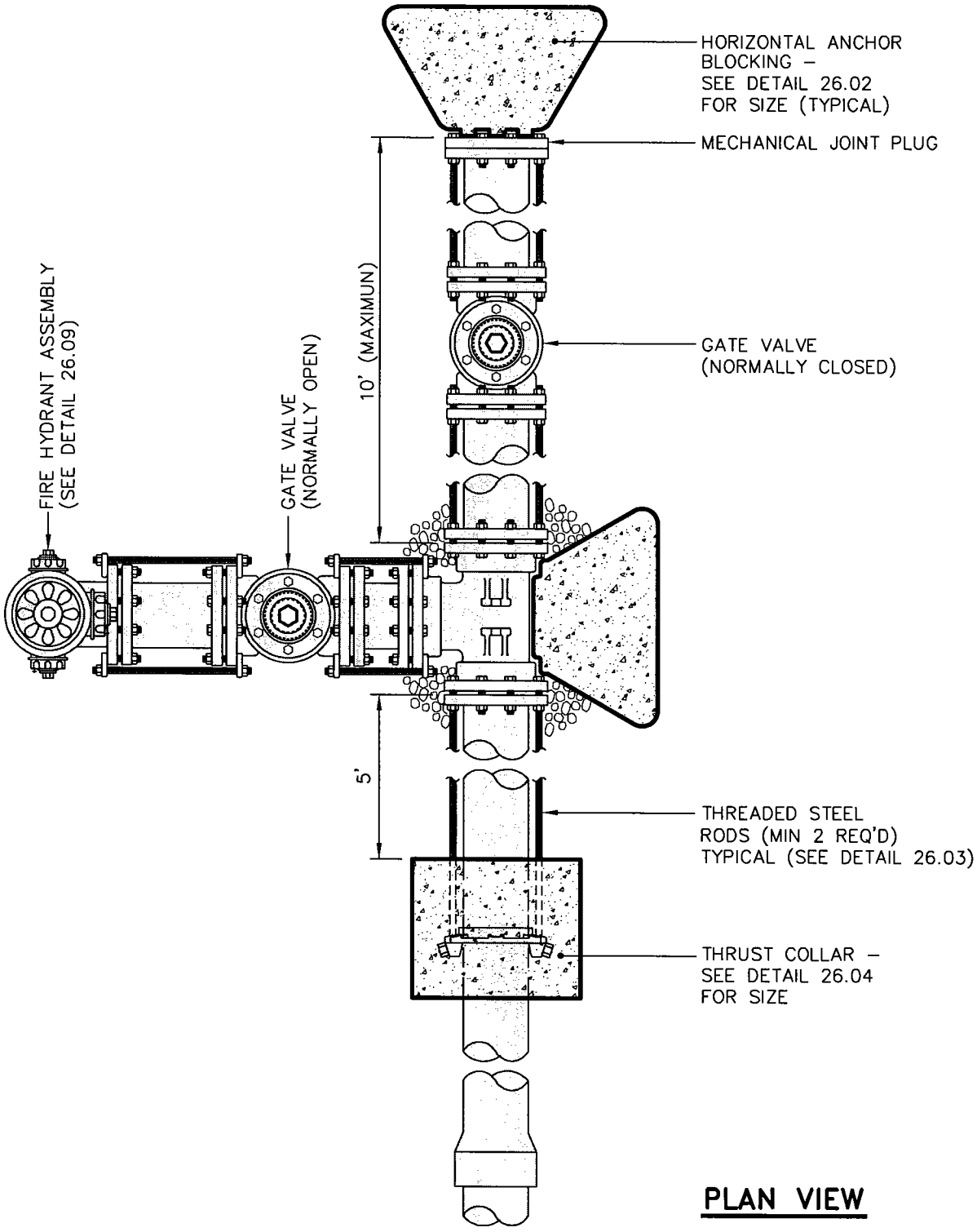
1. 5' DIAMETER MANHOLE FOR VALVES LESS THAN 24".
   6' DIAMETER MANHOLE FOR VALVES 24" OR GREATER.
2. CONE SECTION MAY BE SUBSTITUTED FOR FLAT TOP ACCORDING TO DEPTH.
3. THIS DETAIL APPLIES TO 16" AND LARGER VALVES.

THE CITY OF LYNCHBURG

BUTTERFLY VALVE IN PRECAST MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.07
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



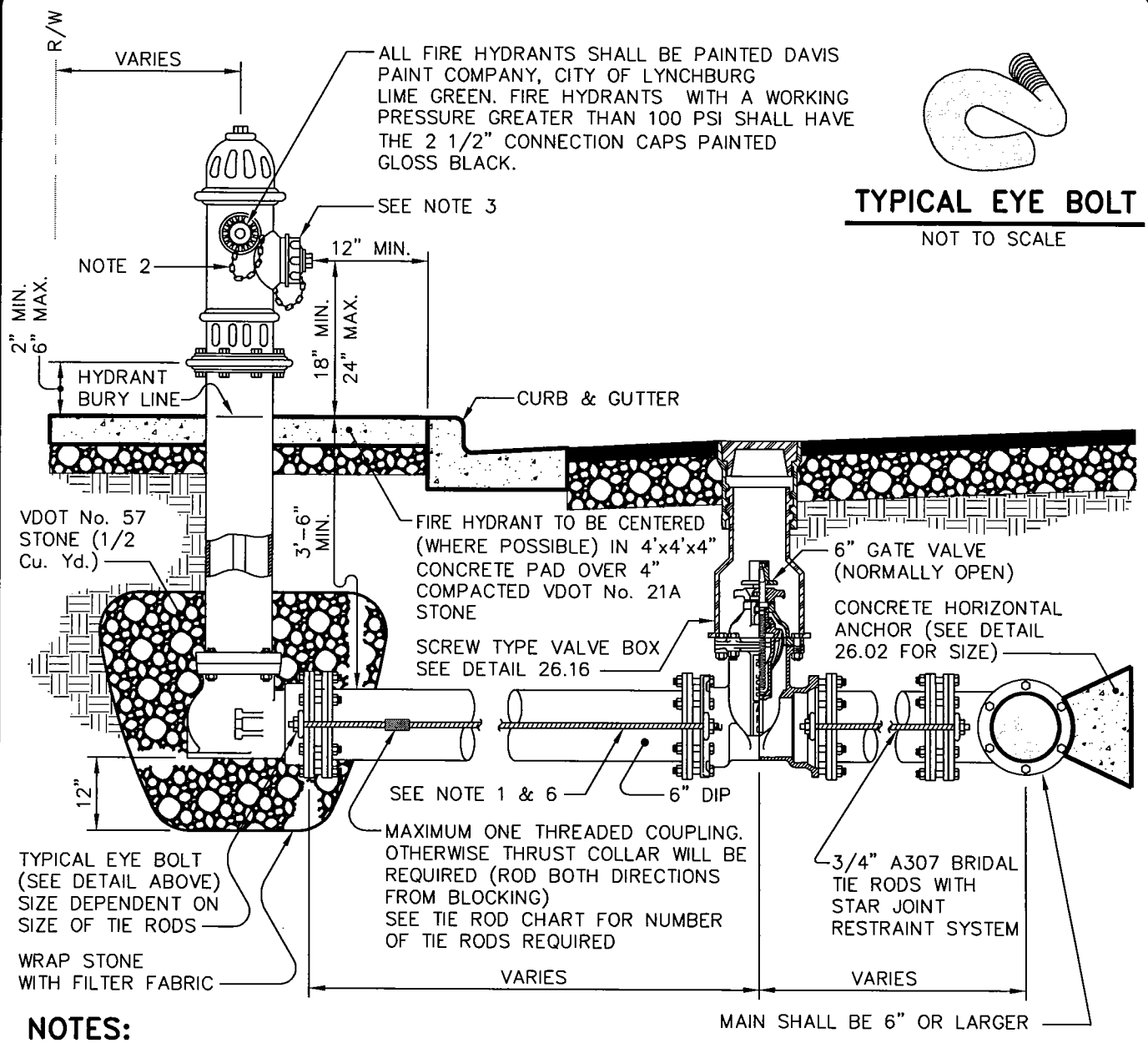
PLAN VIEW

THE CITY OF LYNCHBURG

END of LINE for FUTURE EXPANSION

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.08
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



TYPICAL EYE BOLT

NOT TO SCALE

NOTES:

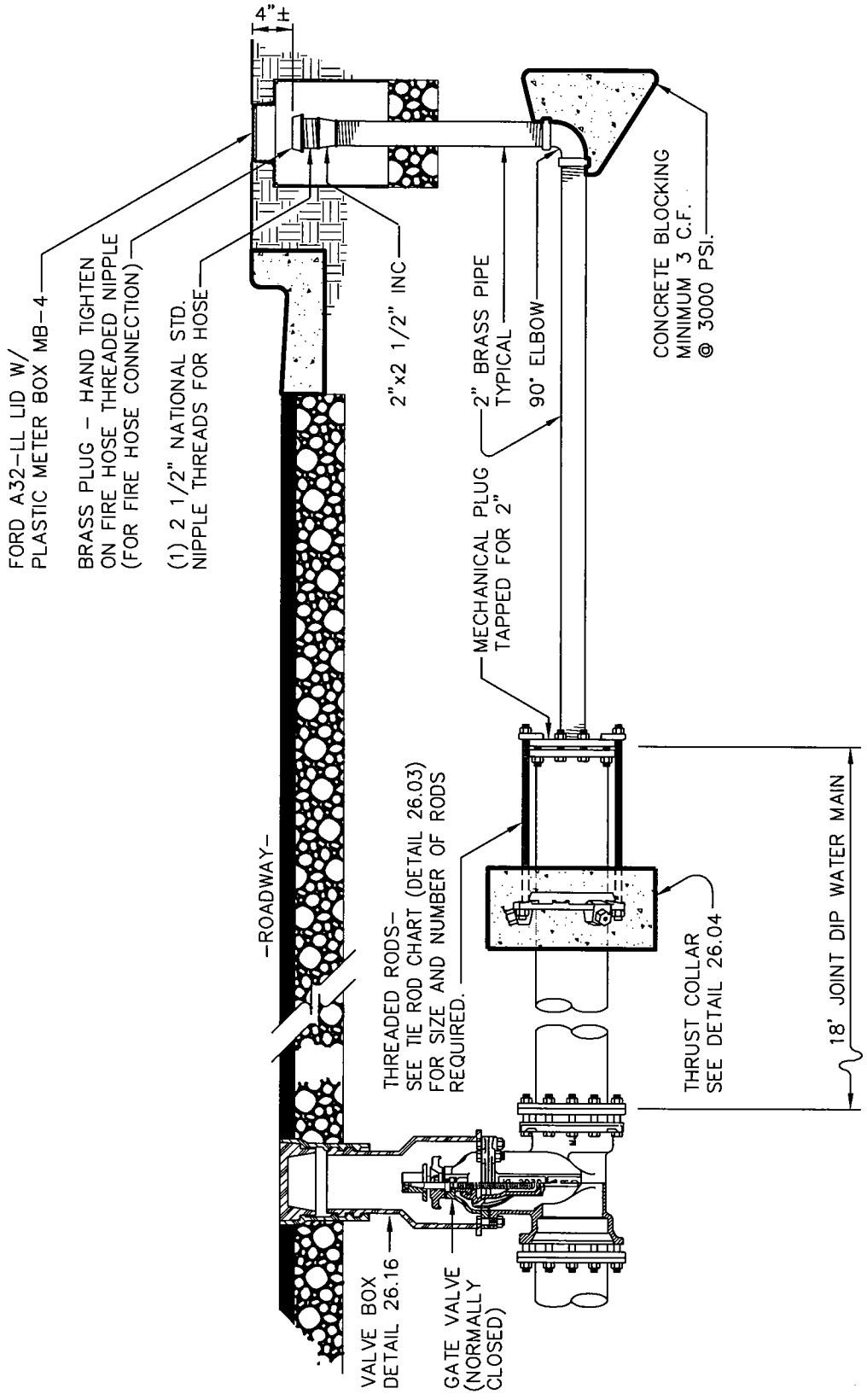
1. MEG-A-LUGS MAY BE SUBSTITUTED FOR TIE RODS UPON APPROVAL BY THE CITY ENGINEER.
2. CHAINS ON FIRE HYDRANTS TO BE REMOVED.
3. HYDRANTS TO BE PLACED WITH PUMPER NOZZLE FACING THE STREET OR AS OTHERWISE DIRECTED.
4. WHEN VALVE BOX IS PLACED OUTSIDE OF PAVEMENT, PROVIDE PRECAST SHOULDER SLAB. (DETAIL 26.18)
5. WHEN FIRE HYDRANTS ARE INSTALLED WHERE ROADWAY HAS A DRAINAGE DITCH AND NO CURB & GUTTER, MINUMUM COVER SHALL BE 24" FROM THE BOTTOM OF DITCH.
6. SEE TIE ROD CHART (DETAIL 26.03) FOR NUMBER OF RODS REQUIRED.
7. WHERE HYDRANT IS SET BEHIND GUARDRAIL, CENTERLINE OF PUMPER NOZZLE TO BE A MINIMUM OF 12" AND A MAXIMUM OF 18" ABOVE TOP OF GUARDRAIL.

THE CITY OF LYNCHBURG

TYPICAL FIRE HYDRANT CONNECTION DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.09
REVISION DATE:	SHEET #:
07-17-03	1 OF 1



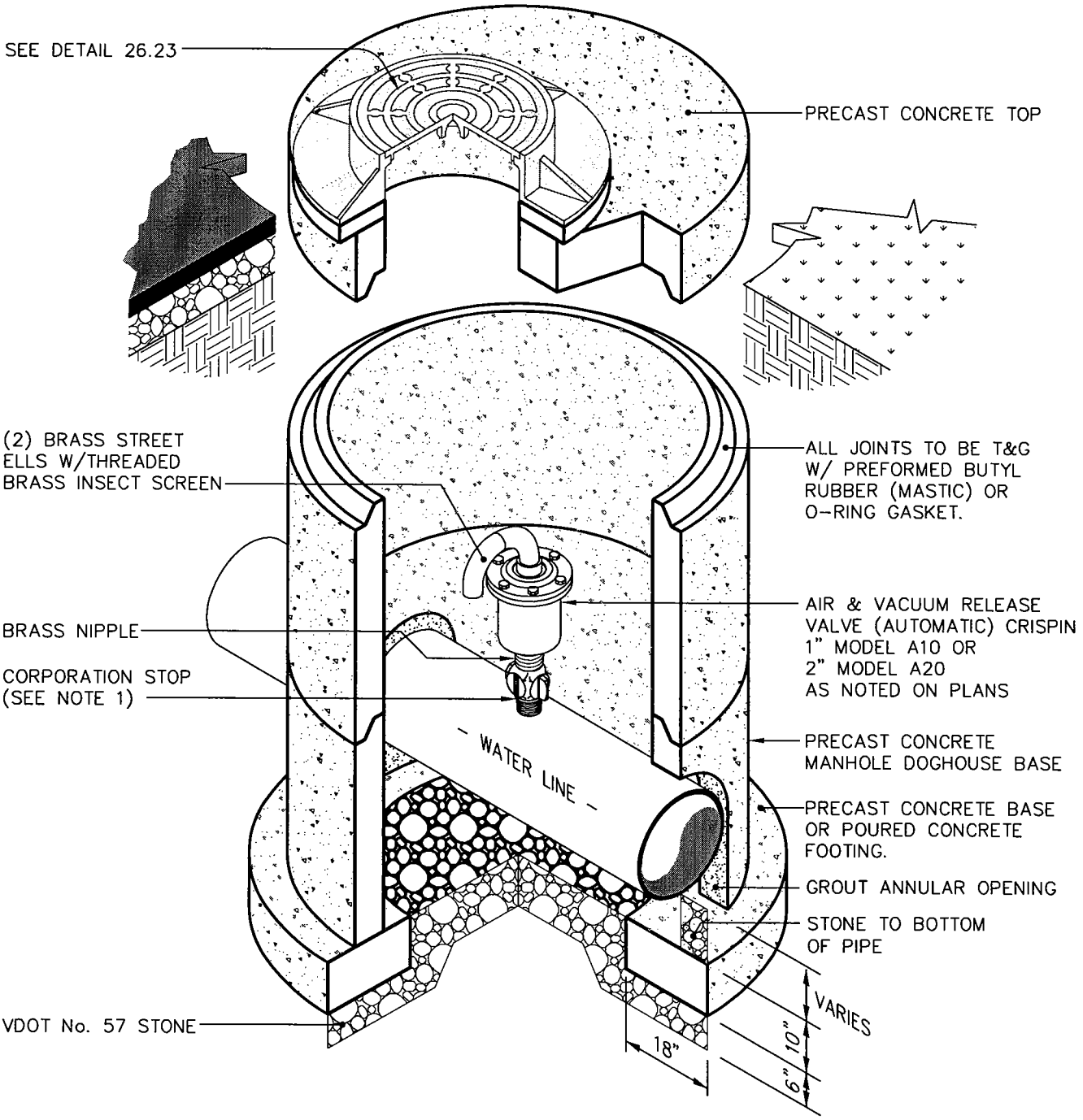
TEMPORARY:
USE ONLY WHEN STANDARD BLOW OFF ARRANGEMENT (DETAIL FH 26.09)
IS NOT PRACTICAL. APPROVAL OF CITY ENGINEER IS REQUIRED.

THE CITY OF LYNCHBURG

TEMPORARY BLOW-OFF ASSEMBLY DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.10
REVISION DATE:	SHEET #:
07-17-03	1 OF 1



NOTES:

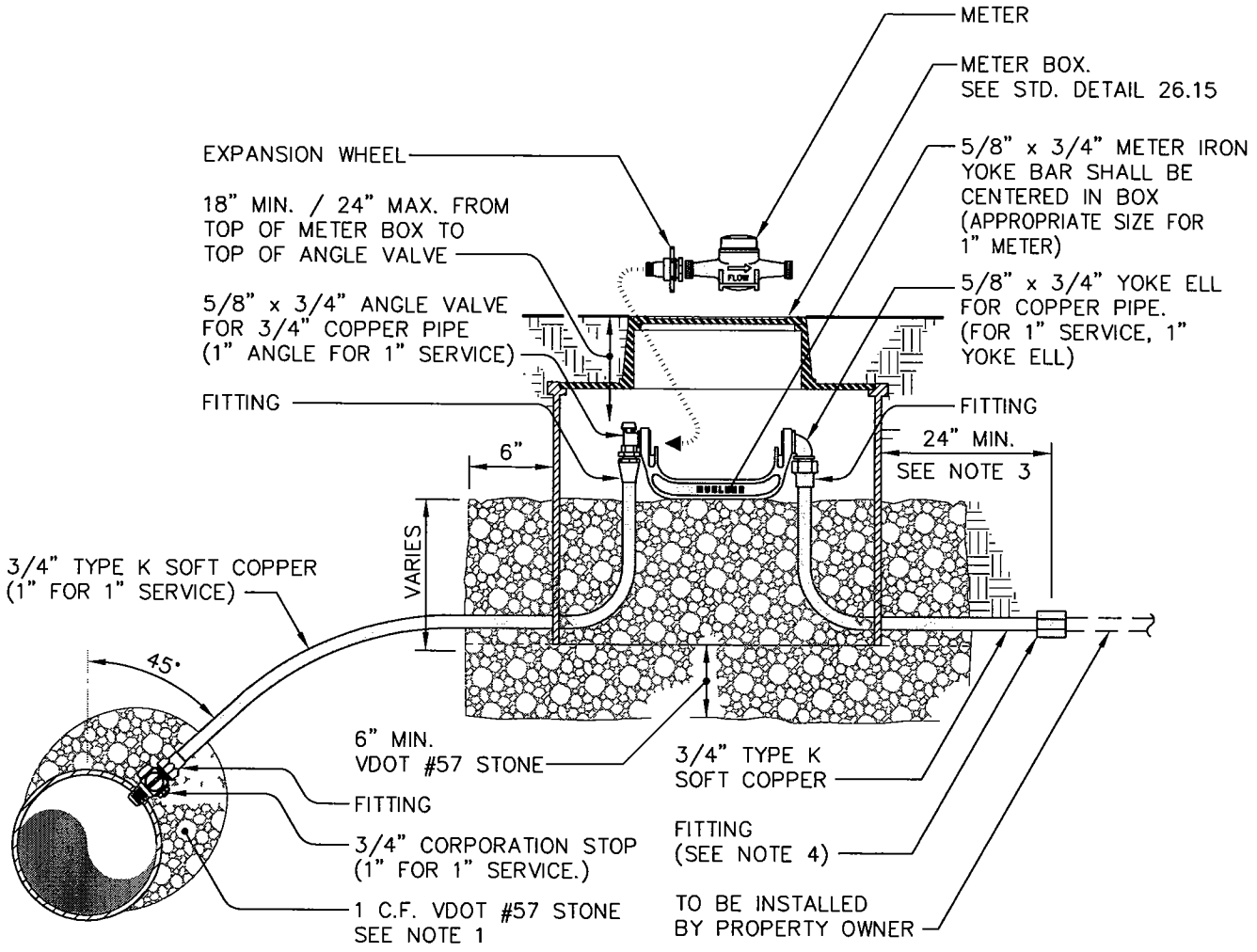
1. DO NOT EXCEED ALLOWABLE DIRECT TAP ALLOWED BY PIPE MANUFACTURER. OTHERWISE, USE DOUBLE STRAP SERVICE SADDLE FOR 2" AIR RELEASE.
2. CONE SECTION MAY BE SUBSTITUTED FOR FLAT TOP ACCORDING TO DEPTH.

THE CITY OF LYNCHBURG

AIR & VACUUM RELEASE VALVE in PRECAST MANHOLE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.11
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

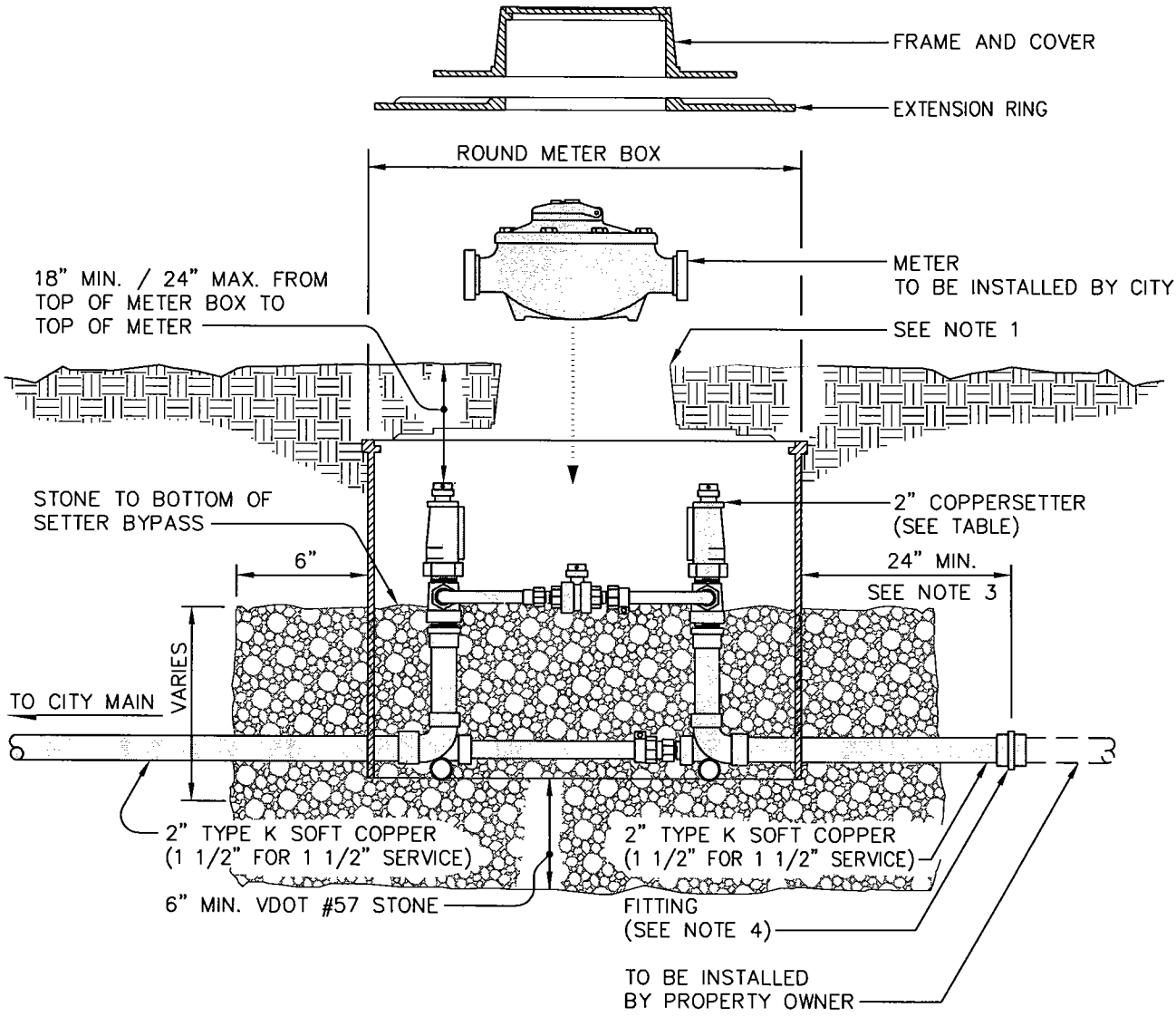
1. FULLY ENCOMPASS CORPORATION STOP WITH STONE.
2. METER BOX TO BE LOCATED ON THE RIGHT-OF-WAY SIDE OF PROPERTY LINE.
3. WHEN METER BOX IS SET IN SIDEWALK, PIGTAIL TO EXTEND 2 FEET BEYOND EDGE OF SIDEWALK.
4. FITTING TO BE USED WHEN CONNECTING TO EXISTING SERVICE, OTHERWISE CRIMP END OF SERVICE LINE.
5. METER & EXPANSION WHEEL TO BE FURNISHED & INSTALLED BY CITY.
6. FITTINGS CAN BE EITHER FLARED OR COMPRESSION.

THE CITY OF LYNCHBURG

3/4 INCH WATER SERVICE (1 INCH WATER SERVICE SIMILAR)

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.12
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

1. IN TRAFFIC LOAD SITUATIONS, COVER & BOX SHALL BE APPROVED BY CITY ENGINEER.
2. METER BOX TO BE LOCATED ON THE RIGHT-OF-WAY SIDE OF PROPERTY LINE
3. WHEN METER BOX IS SET IN SIDEWALK, PIGTAIL TO EXTEND 2 FEET BEYOND EDGE OF SIDEWALK.
4. FITTING TO BE USED WHEN CONNECTING TO EXISTING SERVICE, OTHERWISE CRIMP END OF SERVICE LINE.
5. FULLY ENCOMPASS CORPORATION STOP WITH STONE.
6. DO NOT EXCEED ALLOWABLE DIRECT TAP ALLOWED BY PIPE MANUFACTURER. OTHERWISE, USE DOUBLE STRAP SERVICE SADDLE.

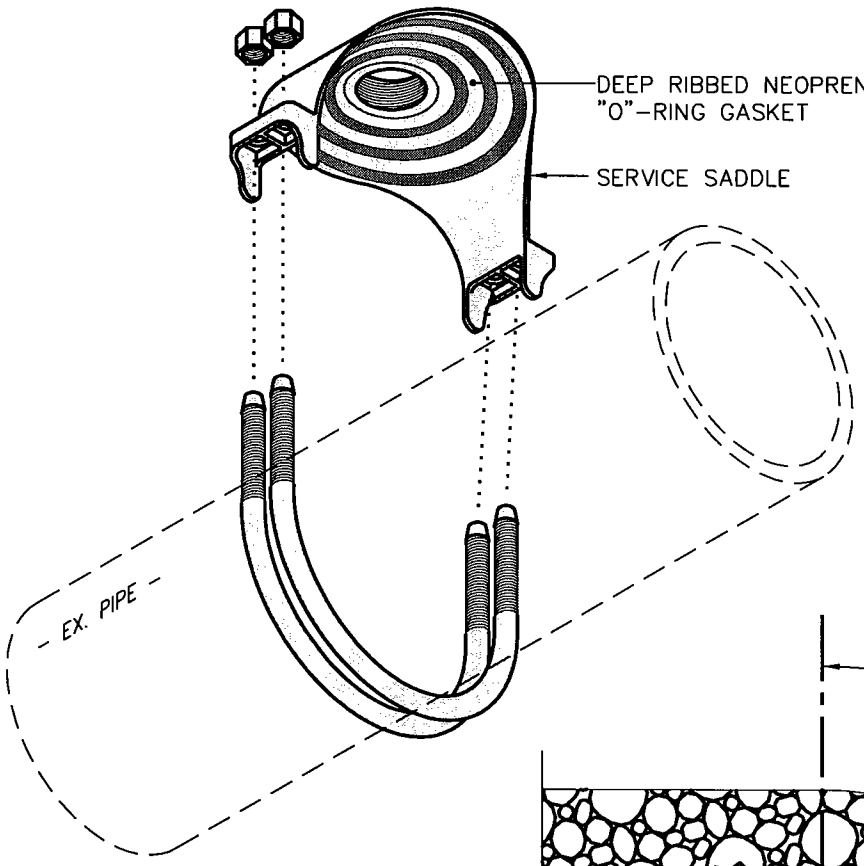
THE CITY OF LYNCHBURG

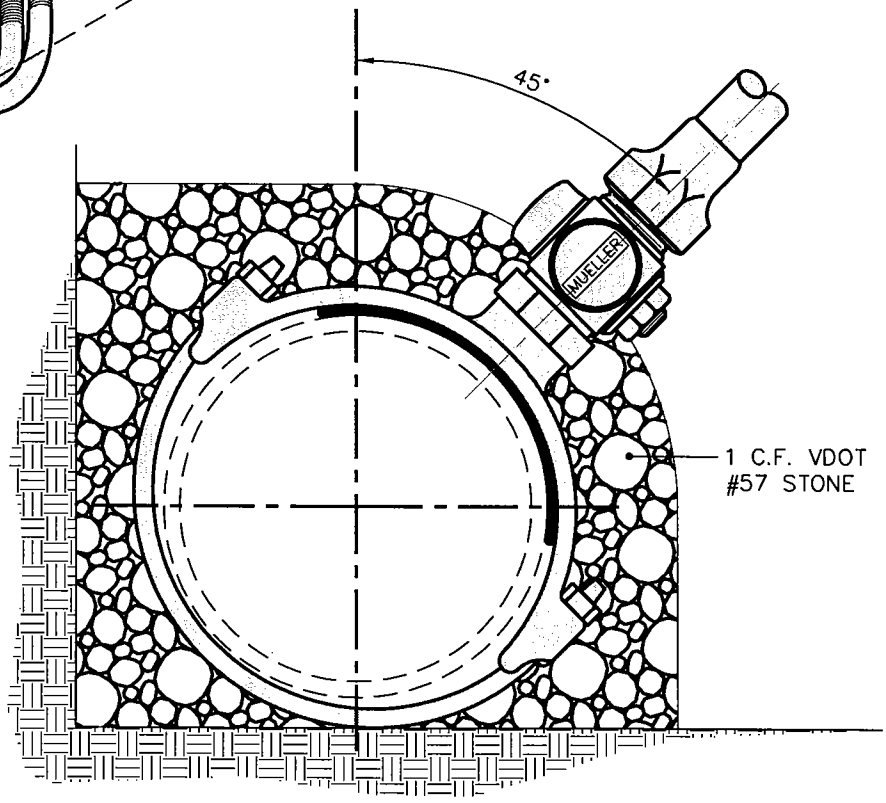
2-INCH WATER SERVICE
(1 1/2-INCH WATER SERVICE SIMILAR)

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.13
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

ISOMETRIC VIEW





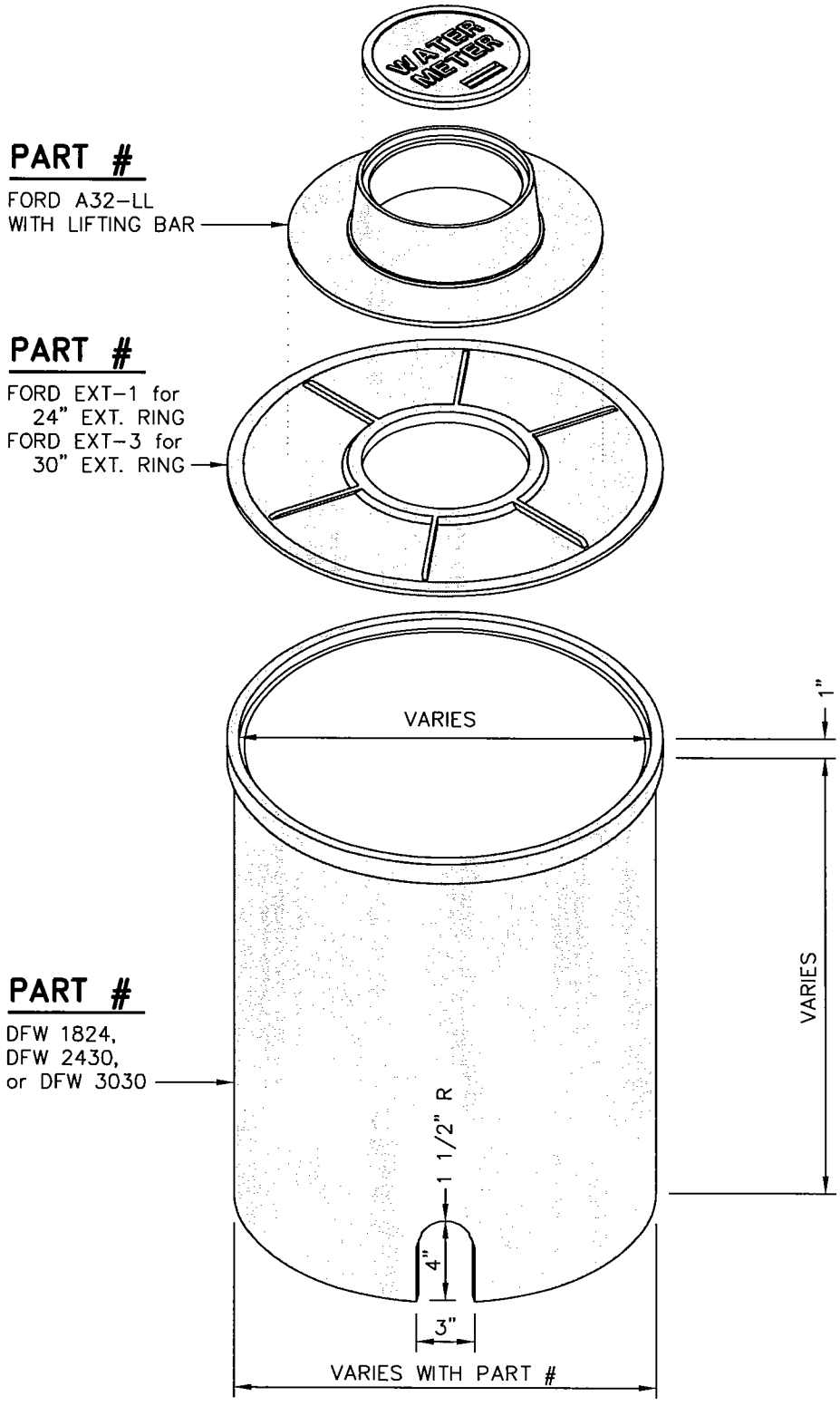
SECTION VIEW

THE CITY OF LYNCHBURG

TYP. DOUBLE STRAP SERVICE SADDLE FOR 6" THRU 12" MAINS

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.14
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

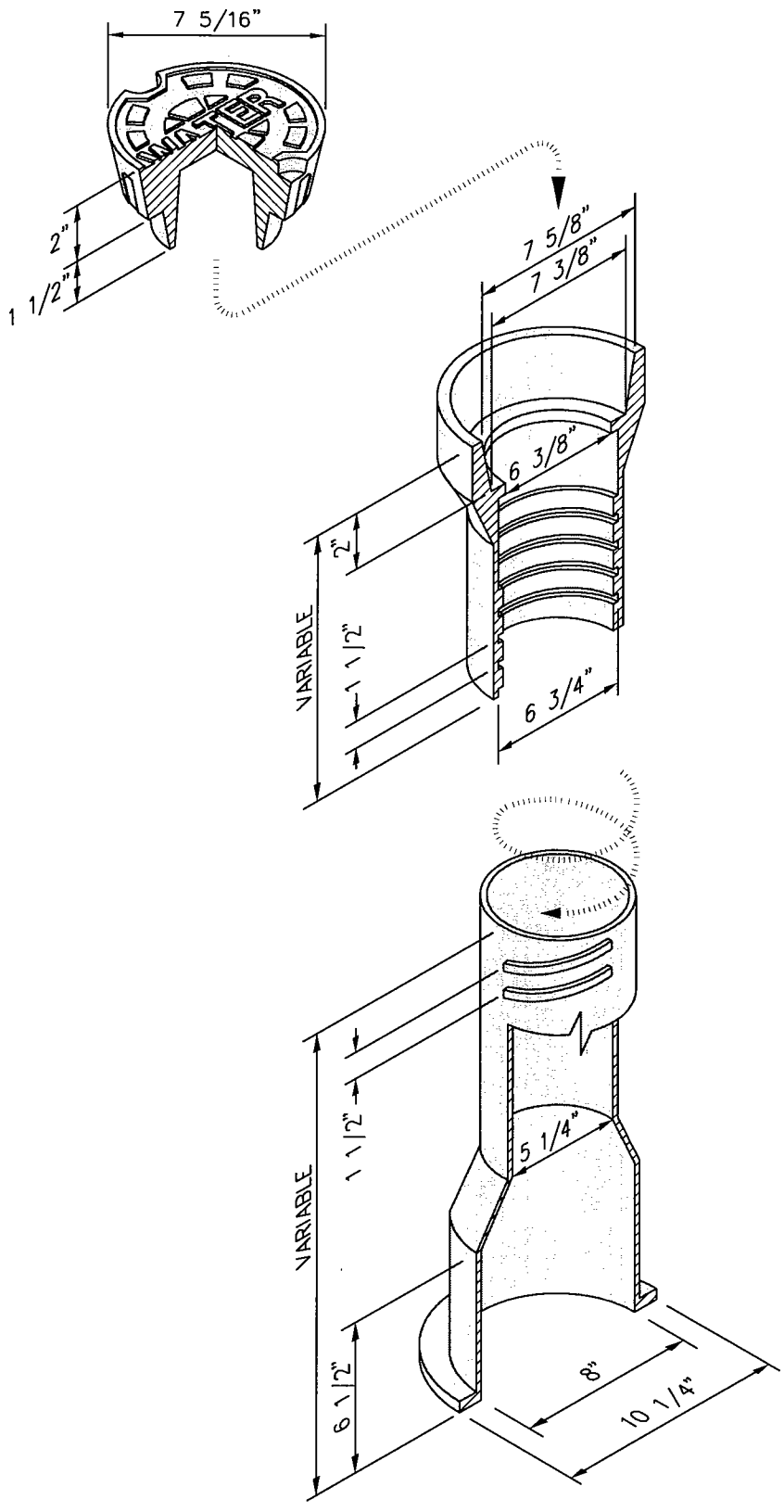
1. THIS BOX AND LID IS NON-TRAFFIC BEARING. WHEN A TRAFFIC BEARING BOX AND LID IS REQUIRED, DETAIL SHALL BE SUBMITTED TO CITY ENGINEER FOR APPROVAL.

THE CITY OF LYNCHBURG

STANDARD 18"x24", 24"x30", or 30"x30" - ROUND METER BOX

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.15
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

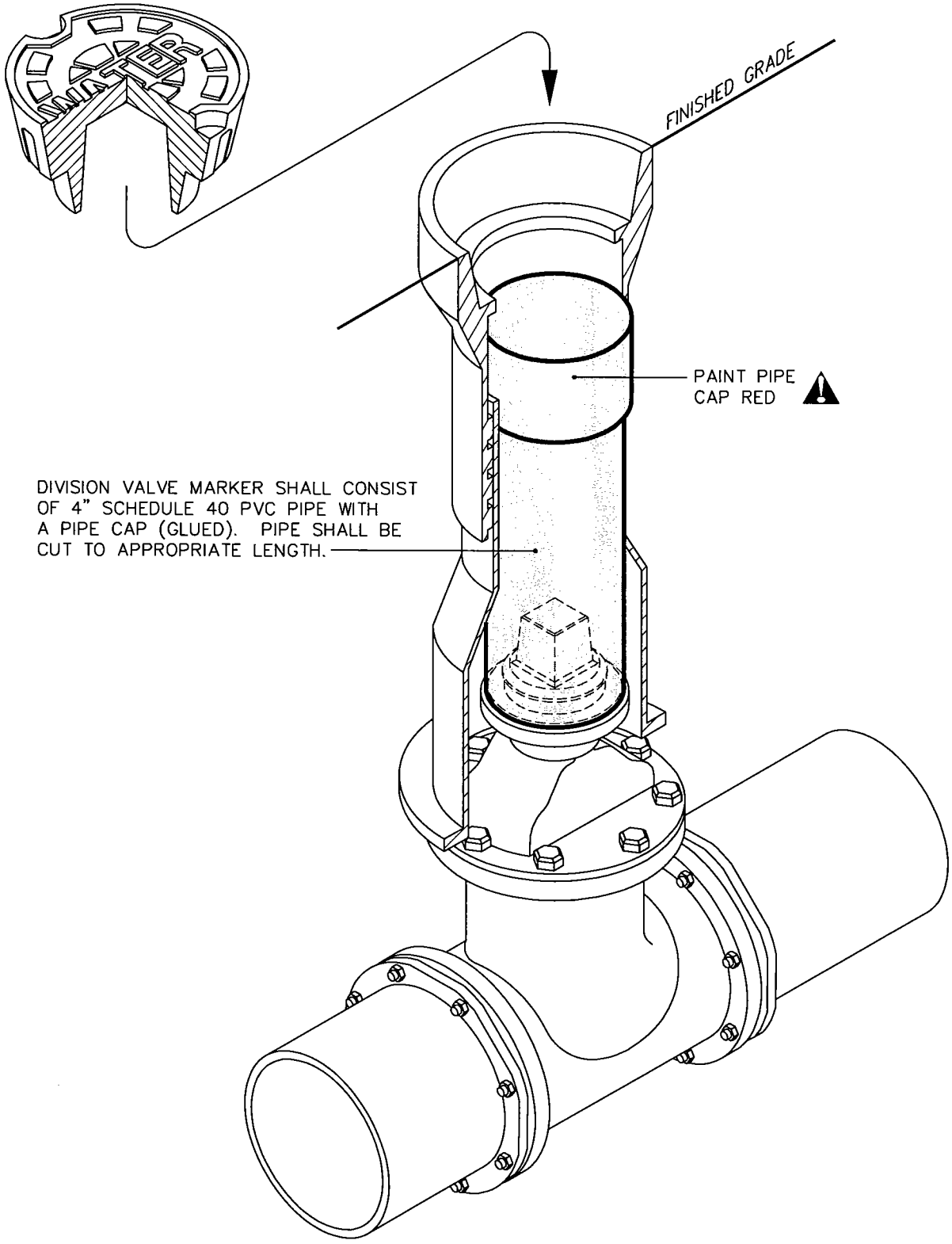


THE CITY OF LYNCHBURG

2 - PIECE ADJUSTABLE SCREW VALVE BOX DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.16
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

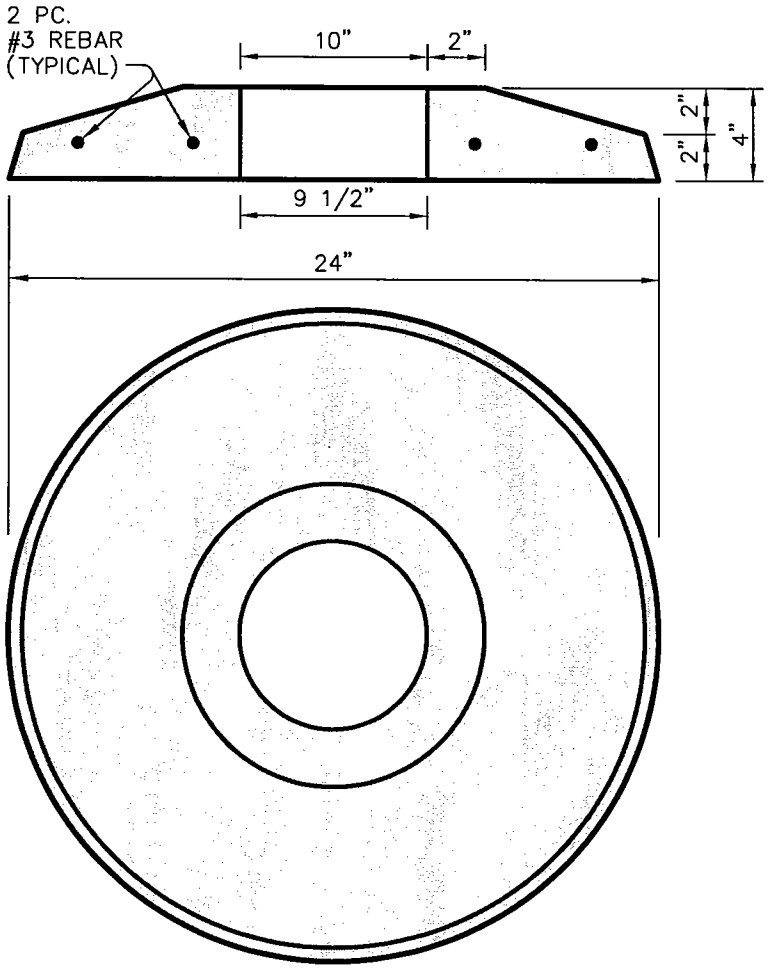


THE CITY OF LYNCHBURG

DIVISION VALVE MARKER DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.17
REVISION DATE:	SHEET #:
04-10-03	1 OF 1



NOTES:

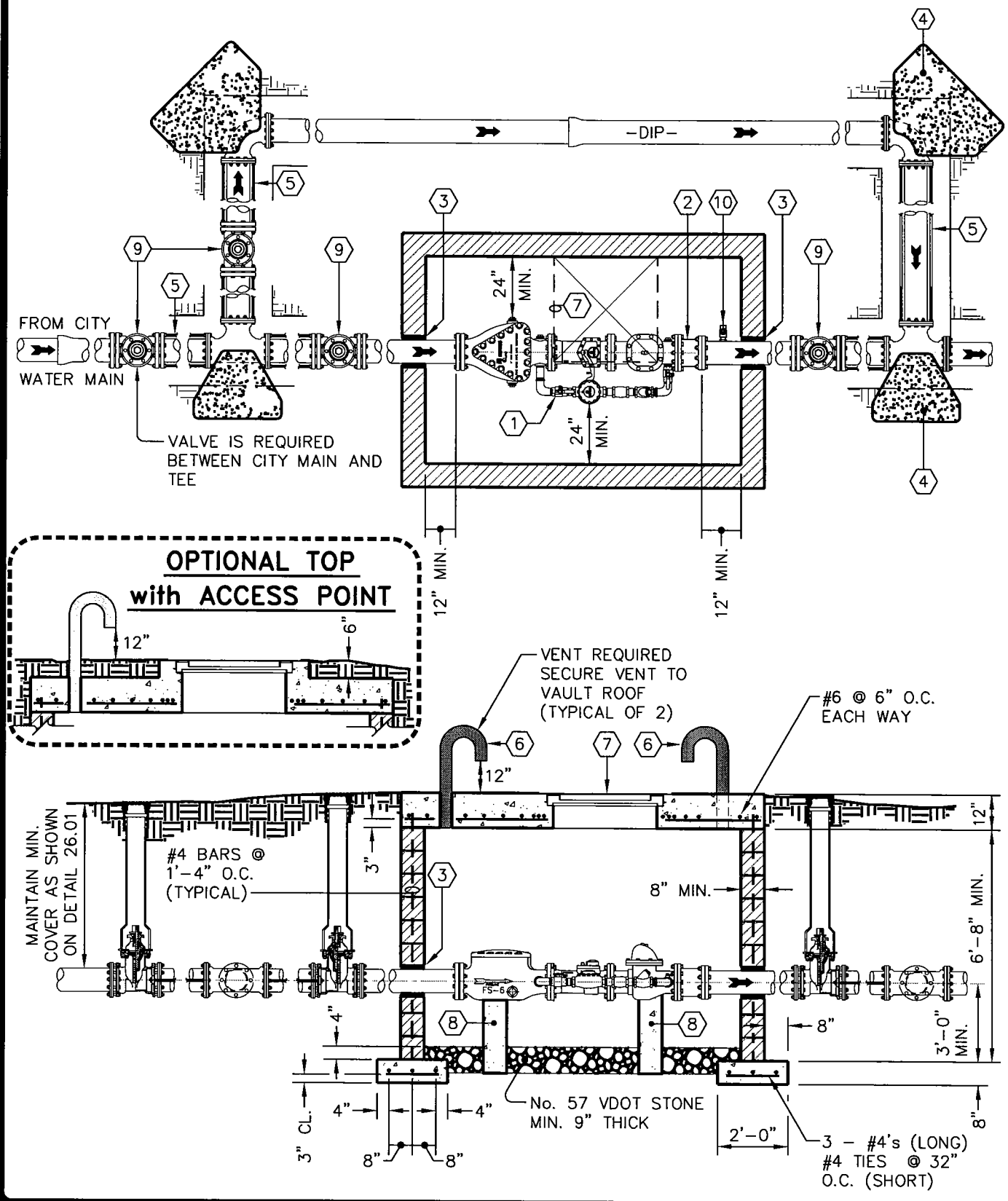
1. VALVE BOX PAD IS TO BE MADE OF CLASS A CONCRETE (3000 PSI @ 28 DAYS).
2. TO BE USED IN UNPAVED AREAS.

THE CITY OF LYNCHBURG

VALVE BOX PRECAST SHOULDER SLAB DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.18
REVISION DATE:	SHEET #:
04-10-03	1 OF 1

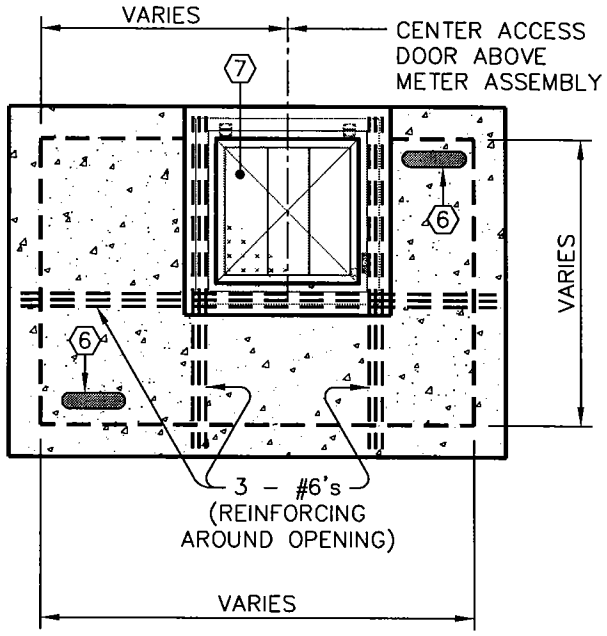


THE CITY OF LYNCHBURG

TURBO METER VAULT

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.19
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



LEGEND

1. TURBO METER ASSEMBLY AND BY-PASS METER. METER TO READ IN CUBIC FEET.
2. DUCTILE IRON FLANGED ADAPTER (DRESSER #127 OR APPROVED EQUAL).
3. WALL SLEEVE WITH LINK SEAL OR APPROVED EQUAL.
4. ANCHOR BLOCKING - SEE STANDARD DETAIL 26.02.
5. TIE ROD ANCHORS - SEE STANDARD DETAIL 26.03.
6. 4" DIAMETER STEEL VENT PIPE WITH BRASS INSECT SCREEN OVER OUTSIDE END. (STYLE EITHER 180° BEND OR MUSHROOM) (2 REQUIRED)
7. 36" X 36" ALUMINUM ACCESS HATCH - BILCO MODEL "J-4AL" OR APPROVED EQUAL.
8. CONCRETE SUPPORTS
9. AWWA C-509 RESILIENT WEDGE GATE VALVE.
10. 2" TEST PLUG.

NOTES:

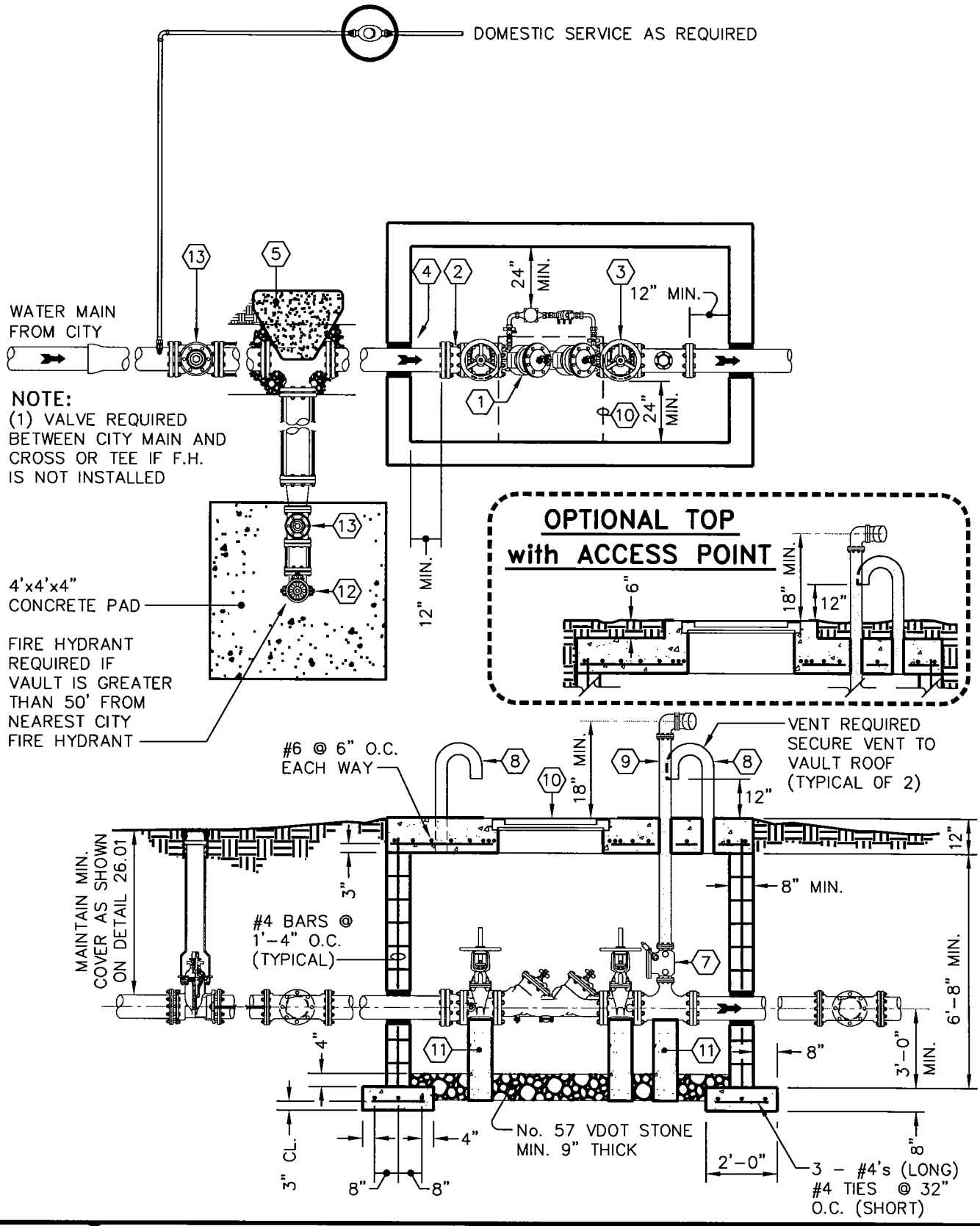
1. THESE DRAWINGS ARE APPROVED STANDARDS FOR THE INSTALLATION OF LARGE WATER METERS AND THE CONSTRUCTION OF C.M.U. VAULTS. ANY DEVIATIONS FROM THESE STANDARDS SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER. NOTE MINIMUM CLEARANCE DIMENSIONS.
2. ALL PIPE AND FITTINGS USED INSIDE THE VAULT SHALL BE FLANGED DUCTILE IRON.
3. CONCRETE FOR SUPPORTS AND ANCHORS SHALL BE 3000 P.S.I.
4. ALL NON-FLANGED FITTINGS SHALL BE TIED WITH THREADED ROD TO ADJACENT FITTINGS AS GENERALLY SHOWN ON THIS SHEET. MEGALUG OR APPROVED EQUAL MAY BE SUBSTITUTED FOR TIE RODS AT MECHANICAL JOINTS.
5. TURBO METER ASSEMBLY SHALL BE ADEQUATELY SUPPORTED BY TWO POURED CONCRETE SUPPORTS SET ON UNDISTURBED EARTH.
6. ALL DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR.
7. WALL SLEEVES SHALL BE SUFFICIENT IN SIZE TO ACCOMMODATE PIPE AND PENETRATION SEAL. SEAL SHALL BE LINK SEAL OR APPROVED EQUAL.
8. VAULT IS NOT DESIGNED TO SUPPORT VEHICULAR TRAFFIC. IF VEHICULAR TRAFFIC MUST PASS OVER VAULT, THE VAULT SHALL BE DESIGNED FOR TRAFFIC LOADING BY A LICENSED ENGINEER.
9. WALLS ARE TO BE CONSTRUCTED OF CONCRETE MASONRY UNITS (C.M.U.) MEETING REQUIREMENTS OF ASTM C-139. MORTAR JOINTS ON INTERIOR TO BE FINISHED FLUSH AND MAY BE LEFT EXTRUDED ON EXTERIOR FACES TO BE UNDERGROUND. C.M.U. TO BE COMPLETELY FILLED WITH GROUT AFTER WALLS ARE COMPLETED AND ALL REINFORCING STEEL IS IN PLACE. GROUT SHALL CONSIST OF ONE PART PORTLAND CEMENT FOR 3 PARTS SAND, THOROUGHLY MIXED WITH WATER TO PRODUCE GROUT HAVING A THICK CREAMY CONSISTENCY.
10. THE CONTRACTOR MAY SUBSTITUTE A PRE CAST OR CAST-IN-PLACE VAULT. BASIC REQUIREMENTS WOULD BE THAT IT MEET THE MINIMUM DIMENSIONS AS SHOWN ON THE DRAWING.
11. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60. ALL REINFORCING BAR DIMENSIONS ON THIS DRAWING ARE TO CENTER OF BARS.
12. AS AN OPTION, THE FLOOR OF VAULT CAN BE POURED WITH 4" MIN. OF 3000 PSI CONCRETE WITH FLOOR DRAIN INSTALLED TO DAYLIGHT.
13. ONE ACCESS DOOR KEY SHALL BE SUBMITTED TO THE UTILITIES METER SUPERVISOR.

THE CITY OF LYNCHBURG

TURBO METER VAULT

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.19
REVISION DATE:	SHEET #:
10-21-04	2 OF 2

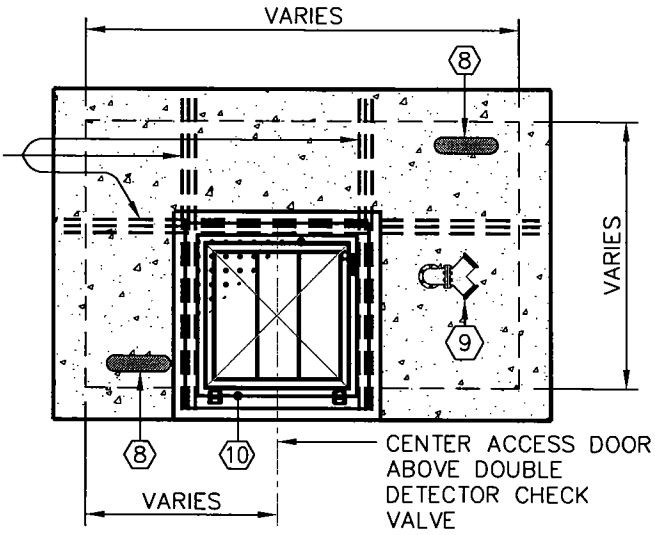


THE CITY OF LYNCHBURG

FIRE LINE DOUBLE DETECTOR CHECK VALVE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.20
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



LEGEND

1. DOUBLE DETECTOR CHECK VALVE ASSEMBLY. METER TO READ IN CUBIC FEET.
2. DUCTILE IRON FLANGED ADAPTER (DRESSER #127 OR APPROVED EQUAL).
3. OS&Y GATE VALVE - 2 REQUIRED.
4. WALL SLEEVE WITH LINK SEAL OR APPROVED EQUAL.
5. ANCHOR BLOCKING - SEE STANDARD DETAIL 26.02.
6. TIE ROD ANCHORS - SEE STANDARD DETAIL 26.03.
7. 4" DIAMETER, FM-UL APPROVED, AUTOMATIC BALL DRIP VALVE.
8. 4" DIAMETER STEEL VENT PIPE WITH BRASS INSECT SCREEN OVER OUTSIDE END. (STYLE EITHER 180° BEND OR MUSHROOM) (2 REQUIRED)
9. MULTIPLE FIRE DEPARTMENT CONNECTION RISER.
10. 36" X 36" ALUMINUM ACCESS HATCH - BILCO MODEL "J-4AL" OR APPROVED EQUAL.
11. CONCRETE SUPPORTS
12. FIRE HYDRANT ASSEMBLY - SEE STANDARD DETAIL 26.09.
13. AWWA C-509 RESILIENT WEDGE GATE VALVE.

NOTES:

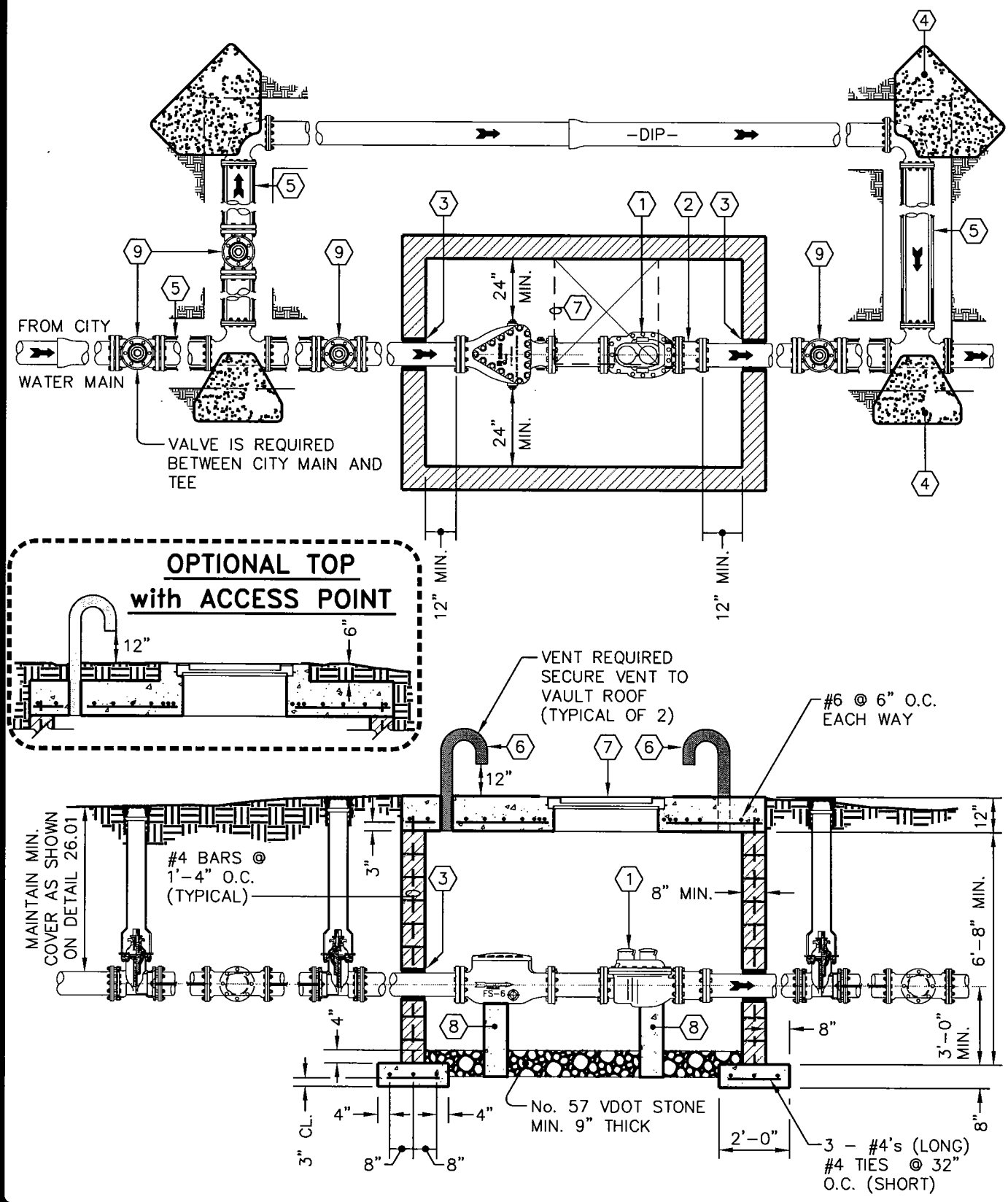
1. THESE DRAWINGS ARE APPROVED STANDARDS FOR THE INSTALLATION OF FIRE LINES WITH DDC VALVE AND THE CONSTRUCTION OF C.M.U. VAULTS. ANY DEVIATIONS FROM THESE STANDARDS SHALL BE REVIEWED AND APPROVED BY THE DIRECTOR OF ENGINEERING.
2. ALL PIPE AND FITTINGS USED INSIDE THE VAULT SHALL BE FLANGED DUCTILE IRON.
3. CONCRETE FOR SUPPORTS AND ANCHORS SHALL BE 3000 P.S.I.
4. ALL NON-FLANGED FITTINGS SHALL BE TIED WITH THREADED ROD TO ADJACENT FITTINGS AS GENERALLY SHOWN ON THIS SHEET. MEGALUG OR APPROVED EQUAL MAY BE SUBSTITUTED FOR TIE RODS AT MECHANICAL JOINTS.
5. PIPING AND VALVES SHALL BE SUPPORTED BY POURED CONCRETE BLOCKS SET ON UNDISTURBED EARTH, AS SHOWN ON 26.20, 1 OF 2.
6. ALL DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR.
7. WALL SLEEVES SHALL BE SUFFICIENT IN SIZE TO ACCOMMODATE PIPE AND PENETRATION SEAL. SEAL SHALL BE LINK SEAL OR APPROVED EQUAL.
8. VAULT IS NOT DESIGNED TO SUPPORT VEHICULAR TRAFFIC. IF VEHICULAR TRAFFIC MUST PASS OVER VAULT, THE VAULT SHALL BE DESIGNED FOR TRAFFIC LOADING BY A LICENSED ENGINEER.
9. WALLS ARE TO BE CONSTRUCTED OF CONCRETE MASONRY UNITS (C.M.U.) MEETING REQUIREMENTS OF ASTM C-139. MORTAR JOINTS ON INTERIOR TO BE FINISHED FLUSH AND MAY BE LEFT EXTRUDED ON EXTERIOR FACES TO BE UNDERGROUND. C.M.U. TO BE COMPLETELY FILLED WITH GROUT AFTER WALLS ARE COMPLETED AND ALL REINFORCING STEEL IS IN PLACE. GROUT SHALL CONSIST OF ONE PART PORTLAND CEMENT FOR 3 PARTS SAND, THOROUGHLY MIXED WITH WATER TO PRODUCE GROUT HAVING A THICK CREAMY CONSISTENCY.
10. THE CONTRACTOR MAY SUBSTITUTE A PRE CAST OR CAST-IN-PLACE VAULT. BASIC REQUIREMENTS WOULD BE THAT IT MEET THE MINIMUM DIMENSIONS AS SHOWN ON THE DRAWING.
11. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60. ALL REINFORCING BAR DIMENSIONS ON THIS DRAWING ARE TO CENTER OF BARS.
12. AS AN OPTION, THE FLOOR OF VAULT CAN BE POURED WITH 4" MIN. OF 3000 PSI CONCRETE WITH FLOOR DRAIN INSTALLED TO DAYLIGHT.
13. ONE ACCESS DOOR KEY SHALL BE SUBMITTED TO THE UTILITIES METER SUPERVISOR.

THE CITY OF LYNCHBURG

FIRE LINE DOUBLE DETECTOR CHECK VALVE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.20
REVISION DATE:	SHEET #:
04-10-03	2 OF 2

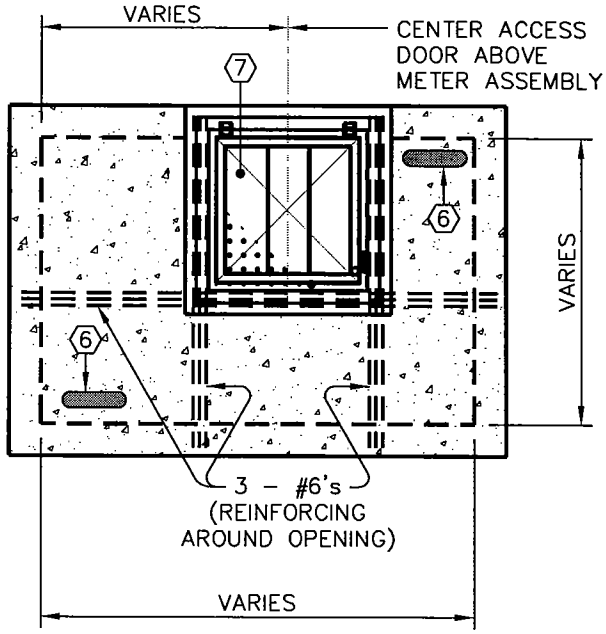


THE CITY OF LYNCHBURG

COMPOUND METER VAULT

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.21
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



LEGEND

1. COMPOUND METER ASSEMBLY. METER TO READ IN CUBIC FEET.
2. DUCTILE IRON FLANGED ADAPTER (DRESSER #127 OR APPROVED EQUAL).
3. WALL SLEEVE WITH LINK SEAL OR APPROVED EQUAL.
4. ANCHOR BLOCKING – SEE STANDARD DETAIL 26.02.
5. TIE ROD ANCHORS – SEE STANDARD DETAIL 26.03.
6. 4" DIAMETER STEEL VENT PIPE WITH BRASS INSECT SCREEN OVER OUTSIDE END. (STYLE EITHER 180° BEND OR MUSHROOM) (2 REQUIRED)
7. 36" X 36" ALUMINUM ACCESS HATCH – BILCO MODEL "J–4AL" OR APPROVED EQUAL.
8. CONCRETE SUPPORTS
9. AWWA C–509 RESILIENT WEDGE GATE VALVE.

NOTES:

1. THESE DRAWINGS ARE APPROVED STANDARDS FOR THE INSTALLATION OF LARGE WATER METERS AND THE CONSTRUCTION OF C.M.U. VAULTS. ANY DEVIATIONS FROM THESE STANDARDS SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER. NOTE MINIMUM CLEARANCE DIMENSIONS.
2. ALL PIPE AND FITTINGS USED INSIDE THE VAULT SHALL BE FLANGED DUCTILE IRON.
3. CONCRETE FOR SUPPORTS AND ANCHORS SHALL BE 3000 P.S.I.
4. ALL NON–FLANGED FITTINGS SHALL BE TIED WITH THREADED ROD TO ADJACENT FITTINGS AS GENERALLY SHOWN ON THIS SHEET. MEGALUG OR APPROVED EQUAL MAY BE SUBSTITUTED FOR TIE RODS AT MECHANICAL JOINTS.
5. COMPOUND ASSEMBLY SHALL BE ADEQUATELY SUPPORTED BY TWO POURED CONCRETE SUPPORTS SET ON UNDISTURBED EARTH.
6. ALL DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR.
7. WALL SLEEVES SHALL BE SUFFICIENT IN SIZE TO ACCOMMODATE PIPE AND PENETRATION SEAL. SEAL SHALL BE LINK SEAL OR APPROVED EQUAL.
8. VAULT IS NOT DESIGNED TO SUPPORT VEHICULAR TRAFFIC. IF VEHICULAR TRAFFIC MUST PASS OVER VAULT, THE VAULT SHALL BE DESIGNED FOR TRAFFIC LOADING BY A LICENSED ENGINEER.
9. WALLS ARE TO BE CONSTRUCTED OF CONCRETE MASONRY UNITS (C.M.U.) MEETING REQUIREMENTS OF ASTM C–139. MORTAR JOINTS ON INTERIOR TO BE FINISHED FLUSH AND MAY BE LEFT EXTRUDED ON EXTERIOR FACES TO BE UNDERGROUND. C.M.U. TO BE COMPLETELY FILLED WITH GROUT AFTER WALLS ARE COMPLETED AND ALL REINFORCING STEEL IS IN PLACE. GROUT SHALL CONSIST OF ONE PART PORTLAND CEMENT FOR 3 PARTS SAND, THOROUGHLY MIXED WITH WATER TO PRODUCE GROUT HAVING A THICK CREAMY CONSISTENCY.
10. THE CONTRACTOR MAY SUBSTITUTE A PRE CAST OR CAST–IN–PLACE VAULT. BASIC REQUIREMENTS WOULD BE THAT IT MEET THE MINIMUM DIMENSIONS AS SHOWN ON THE DRAWING.
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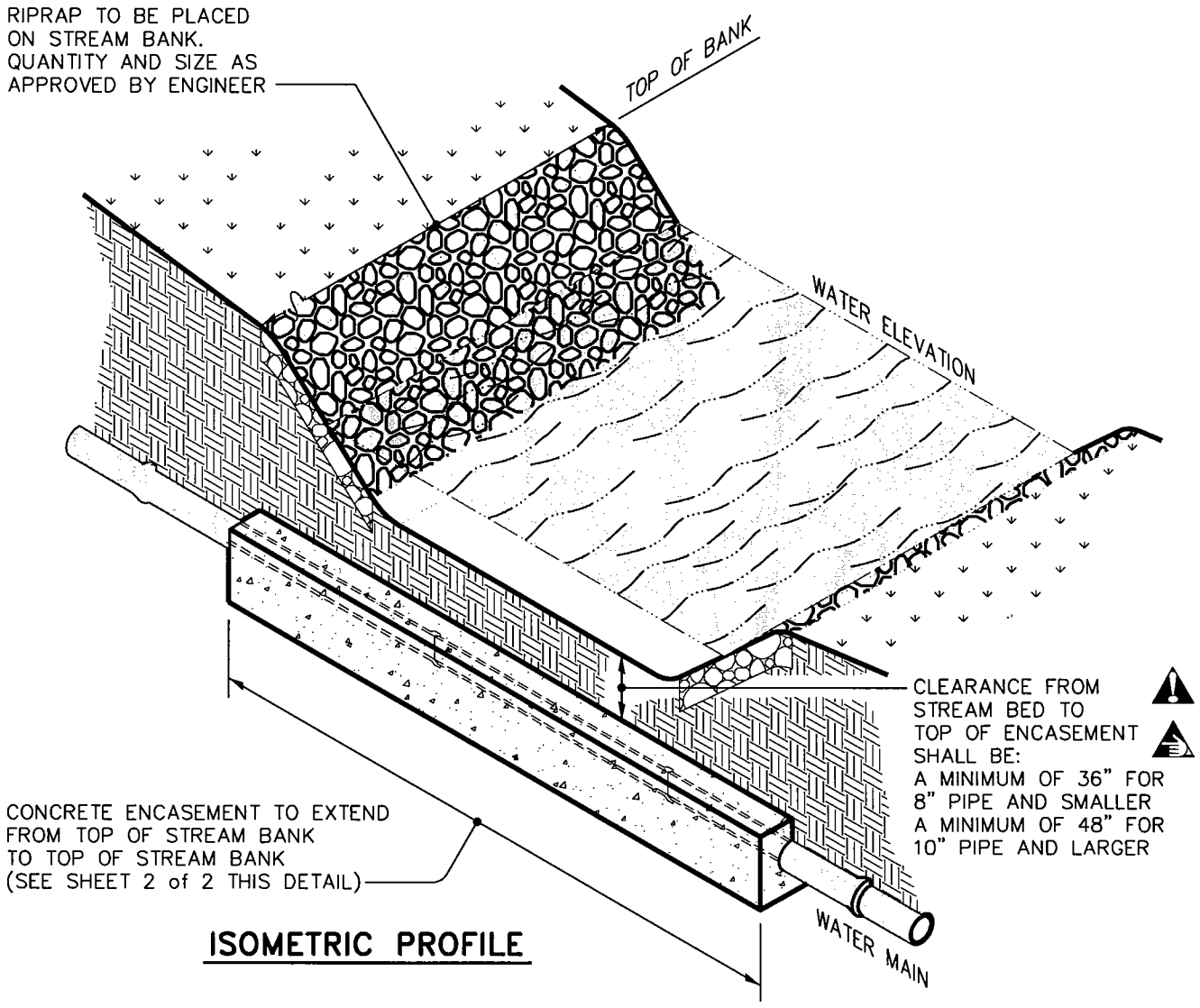
13. ONE ACCESS DOOR KEY SHALL BE SUBMITTED TO THE UTILITIES METER SUPERVISOR.

THE CITY OF LYNCHBURG

COMPOUND METER VAULT

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.21
REVISION DATE:	SHEET #:
04–10–03	2 OF 2



ISOMETRIC PROFILE

NOTES:

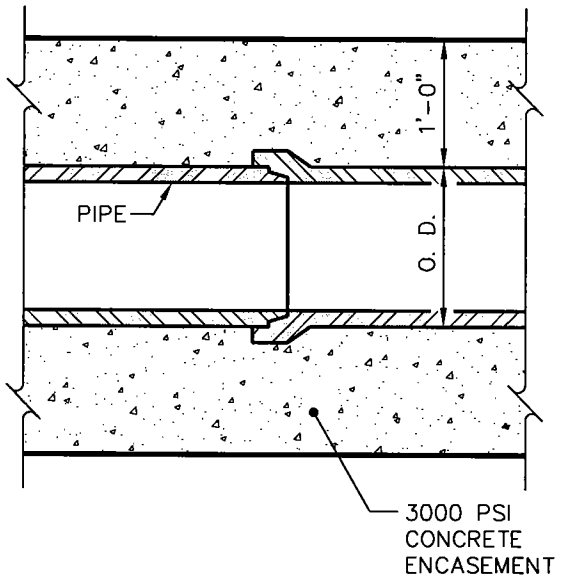
1. CONCRETE TO BE 3000 PSI.
2. ENCASEMENT TO BE USED ONLY WHERE SPECIFIED ON PLANS.
3. PIPE SHALL BE DUCTILE IRON PIPE.
4. FILTER FABRIC TO BE PLACED UNDER RIP-RAP AND KEYED INTO EMBANKMENT.

THE CITY OF LYNCHBURG

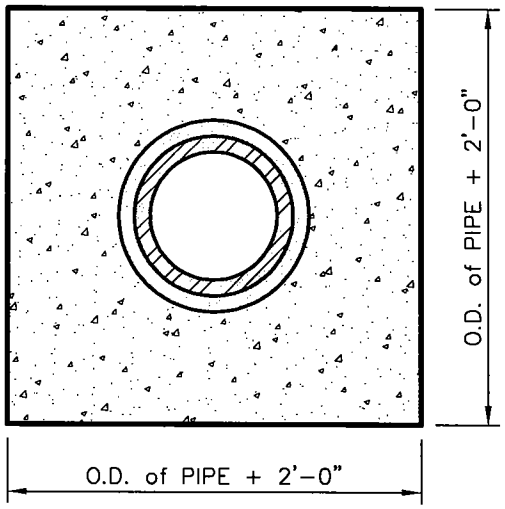
WATER LINE CROSSING BENEATH STREAM BED

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.22
REVISION DATE:	SHEET #:
04-10-03	1 OF 2



LONGITUDINAL SECTION



TRANSVERSE SECTION

NOTES:

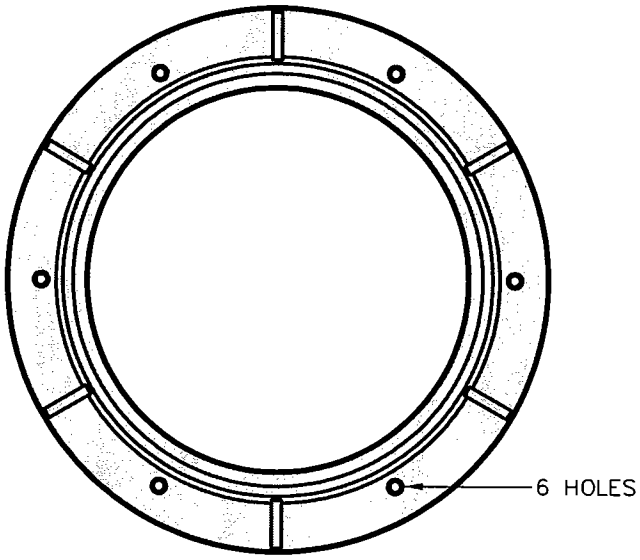
1. ENCASEMENT TO BE USED ONLY WHERE SPECIFIED ON PLANS.

THE CITY OF LYNCHBURG

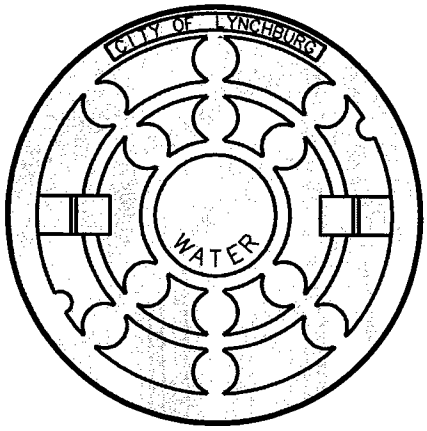
WATER LINE CROSSING BENEATH STREAM BED

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

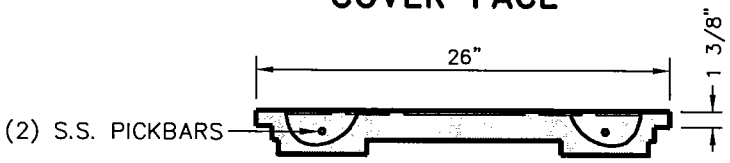
SCALE:	DETAIL #
NOT TO SCALE	26.22
REVISION DATE:	SHEET #:
04-10-03	2 OF 2



FRAME TOP VIEW



COVER FACE



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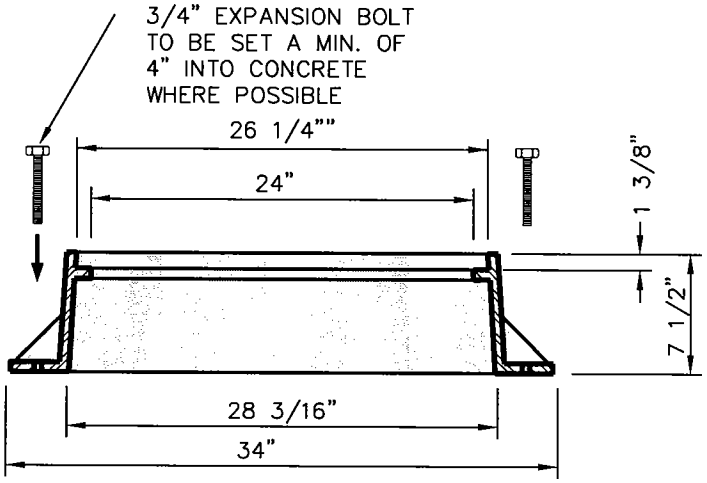

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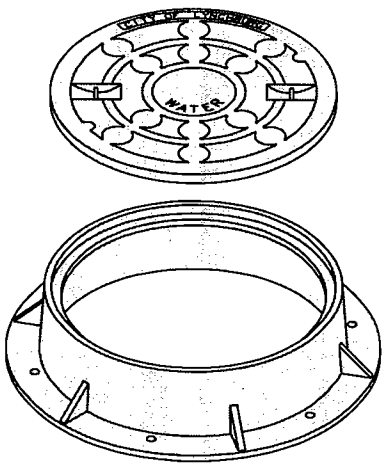

ISOMETRIC

NOTES:

1. PARTS #'s: US FOUNDRY 710 RING AND DP COVER, EAST JORDAN IRON WORKS OR APPROVED EQUAL.
2. MANHOLE FRAMES AND COVERS SHALL BE ROADWAY TYPE WITH DEEP SOCKET COVERS. MACHINE FRAMES AND COVERS TO PREVENT RATTLING. CASTINGS SHALL BE GRAY IRON MEETING REQUIREMENTS OF ASTM A48, CLASS 30.

THE CITY OF LYNCHBURG

STANDARD MANHOLE FRAME and COVER

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.23
REVISION DATE:	SHEET #:
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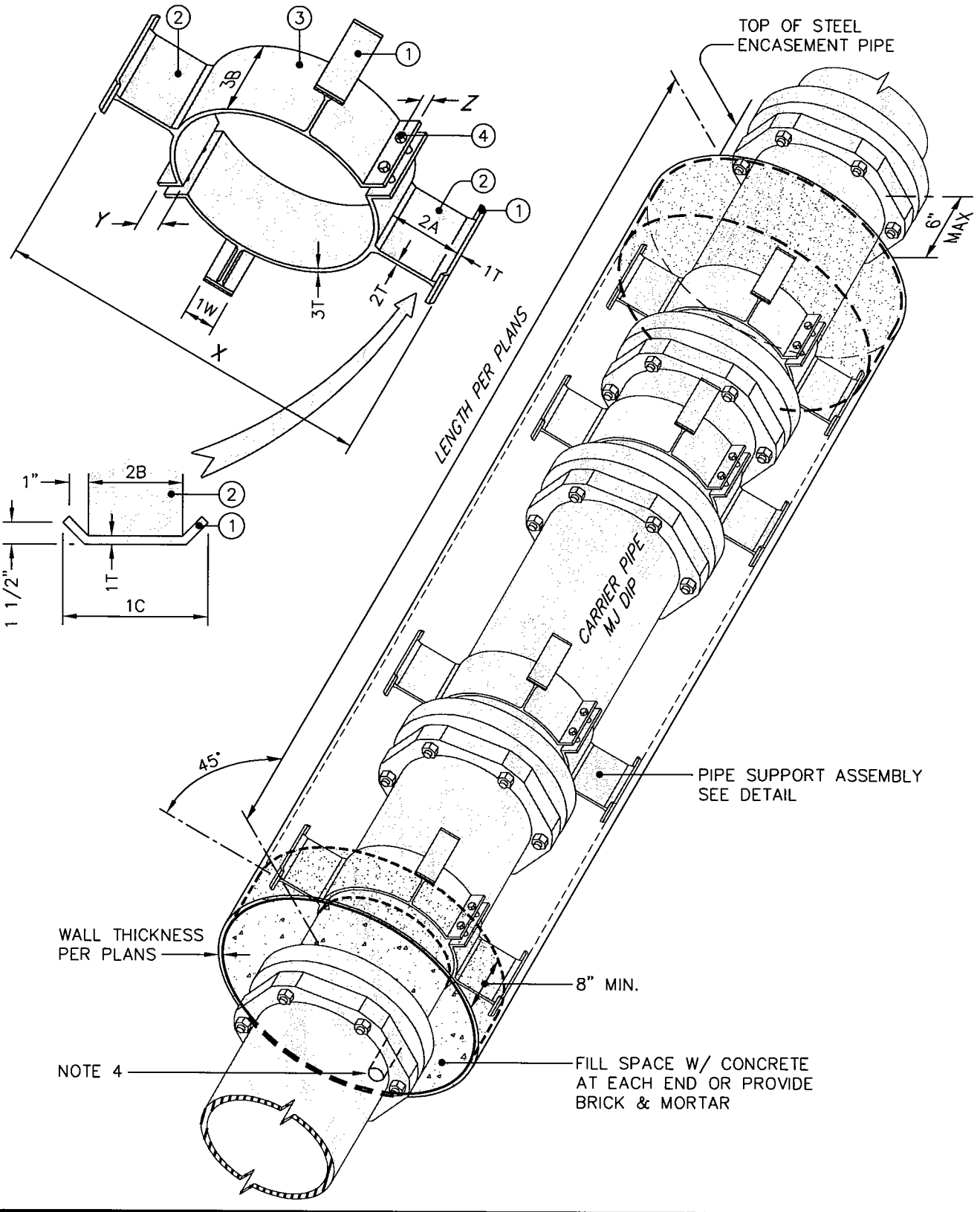


THE CITY OF LYNCHBURG

STEEL ENCASEMENT DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:	DETAIL #
NOT TO SCALE	26.24
REVISION DATE:	SHEET #:
04-10-03	1 OF 2

THE CITY OF LYNCHBURG

STEEL ENCASEMENT DETAIL

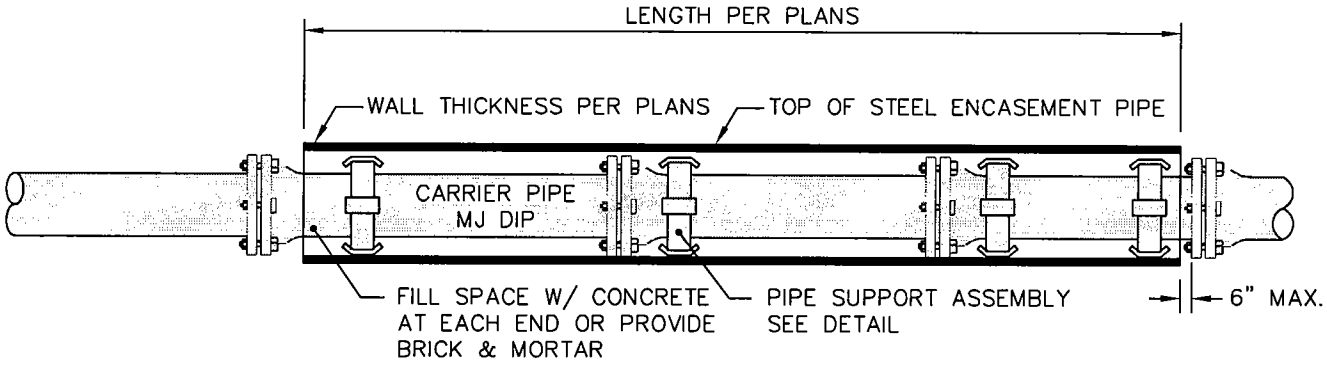
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE

REVISION DATE: 04-10-03

DETAIL # 26.24

SHEET #: 2 OF 2



ENCASEMENT PIPE DETAIL

CARRIER PIPE		CASING PIPE RAILROAD (*) HIGHWAY				PIPE SUPPORT ASSEMBLY MARK NUMBER									DIMENSIONS		
						①			②			③					
NOMINAL DIA.	O.D.	O.D.	WALL	O.D.	WALL	C	W	T	B	A	T	B	T	4	X	Y	Z
6"	6.90"	12"	.251"	12"	.188"	5"	2"	3/8"	3"	1"	3/8"	3"	3/8"	1/2" DIA. 1 REQ'D	10.40"	1 7/8"	3/4"
8"	9.05"	16"	.282"	16"	.188"	6"	2"	3/8"	4"	1 3/4"	3/8"	3"	3/8"	1/2" DIA. 1 REQ'D	14.05"	1 7/8"	3/4"
10"	11.10"	24"	.407"	24"	.188"	6"	2"	3/8"	4"	4 3/4"	3/8"	4"	3/8"	1/2" DIA. 1 REQ'D	22.10"	3"	1 3/8"
12"	13.20"	24"	.407"	24"	.188"	6"	2"	3/8"	4"	3 3/4"	3/8"	4"	3/8"	1/2" DIA. 1 REQ'D	22.20"	3"	1 3/8"
14"	15.30"	24"	.407"	24"	.250"	6"	2"	3/8"	4"	2 3/4"	3/8"	4"	3/8"	1/2" DIA. 1 REQ'D	22.30"	3"	1 3/8"
16"	17.40"	30"	.469"	30"	.250"	8"	3"	3/8"	6"	4 1/4"	3/8"	6"	3/8"	3/4" DIA. 1 REQ'D	27.40"	3"	1 3/8"
18"	19.50"	30"	.469"	30"	.250"	8"	3"	3/8"	6"	3 1/4"	3/8"	6"	3/8"	3/4" DIA. 1 REQ'D	27.50"	3"	1 3/8"
24"	25.80"	42"	.563"	42"	.312"	12"	4"	1/2"	10"	5 3/4"	1/2"	10"	1/2"	1/2" DIA. 2 REQ'D	39.30"	3"	1 3/8"
30"	32.00"	42"	.563"	42"	.312"	12"	4"	1/2"	10"	2 1/2"	1/2"	10"	1/2"	1/2" DIA. 2 REQ'D	39.00"	3"	1 3/8"

* DIMENSIONS ARE WITHOUT COATINGS

NOTES:

1. GREASE ENCASEMENT PIPE AS REQUIRED FOR EASE OF INSTALLATION.
2. INSTALLATION BY DRY BORE & JACKING.
3. STEEL PIPE TO BE 35,000 PSI MIN. YIELD STRENGTH.
4. PROVIDE A 2" DRAIN PIPE FROM CASING PIPE AT DOWNSTREAM INVERT OF CASING PIPE. DRAIN TO DAYLIGHT OR FRENCH DRAIN.

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